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Dr. Geo. Dock

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TRANSACTIONS

—OF THE—

TEXAS STATE MEDICAL ASSOCIATION.

EIGHTH ANNUAL SESSION, 1876.

HELD IN THE CITY OF MARSHALL, APRIL 4, 5, 6 & 7.

MARSHALL:
JENNINGS BROS., BOOK AND JOB PRINTERS AND BLANK BOOK MANUFACTURERS.
1876.

TRANSACTIONS

—OF THE—

TEXAS STATE MEDICAL ASSOCIATION

EIGHTH ANNUAL SE

HELD IN THE CITY OF MARSHA

MARSH
JENNINGS BROS., BOOK AND JOB PRINTE

OFFICERS 1876-77.

PRESIDENT.

R. H. HARRISON.....Columbus.

VICE-PRESIDENTS.

JNO. H. POPE.....Marshall.
THOS. W. WILEY.....Dallas.
W. H. PARK.....Tyler.

SECRETARY.

W. A. EAST.....Hallettsville.

TREASURER.

J. LARENDON.....Houston.

BOARD OF CENSORS.

T. D. WOOTEN.....Austin.
A. G. CLOPTON.....Jefferson.
J. J. BURROUGHS.....Houston.
S. F. STARLEY.....Corsicana.
A. E. Carothers.....Austin.

TIME AND PLACE FOR NEXT MEETING.

FIRST TUESDAY IN APRIL, 1877.....Galveston.

STANDING COMMITTEES,

FOR YEAR 1876-7.

Science and Progress of Medicine.

H. W. BROWN, M. D., Chairman.....Waco,
F. W. HOLLAND, M D,.....Tyler,
A. P. BROWN, M D,.....Jefferson,
J. T. NORRIS, M D,.....Brenham,
J. M. FORT, M D,.....Paris.

Surgery.

A. E. CAROTHERS, M. D., Chairman,.....Austin,
H. K. LEAKE, M D,.....Dallas,
B. F. EADS, M D.,.....Marshall,
GEORGE CUPPLES, M D,.....San Antonio,
W. H. PARK, M D,.....Tyler.

Obstetrics.

C. M. BLOCKER, M. D., Chairman.....Jonesville, Harrison Co.,
D. A. SHUFORD, M D,.....Tyler,
H. B. WALTON, M D,.....Dallas,
M. A. TAYLOR, M D,.....Austin,
H. H. BECK, M D,.....

Diseases of Women.

L. S. RAYFIELD, M. D. Chairman.....Jefferson,
HENRY DYE, M D,.....Plano,
W. A. MORRIS, M D,.....Austin,
DORSEY MASON, M D,.....Houston,
A. A. JOHNSTON, M D,.....Dallas.

Diseases of Children.

H. B. WALTON M. D., Chairman.....Dallas,
W. A. ARCHER, M D,.....Houston,
A. G. CLOPTON, M D,.....Jefferson,
J. C. B. RENFRO, M D,.....La Grange,
ALEXANDER ACHESON, M D,.....Denison.

Climatology and Epidemics.

EUGENE PALMER, M. D., Chairman,.....Houston,
J. H. SEARS, M D,.....Waco,
E. P. BECTON, M D,.....Sulphur Springs,

149932

L. B. CREATH, M D,..... .....Brenham,
A. N. DENTON, M D,.....San Marcos.

Record of Cases.

T. D. Wooten, M. D., Chairman,.....Austin,
S. F. Starley, M. D.,.....Corsicana,
B. Powell, M. D.,.....Houston,
W. J. Burt, M. D.,.....Austin,
R. M. Swearingen, M. D.,.....Austin.

Indigenous Medical Resources.

S. R. Burroughs, M. D., Chairman,.....Guy's Store,
J. P. Lehde, M. D.,.....New Braunfels,
W. A. Bell, M. D.....Farmersville,
J. V. Childers, M. D.,.....Dallas,
S. F. Vaughn, M. D.,.....Jonesville.

State Board of Health.

E. P. M. Johnson, M. D., Chairman,.....Marshall.
S. D. Thruston, M. D.,.....Dallas,
H. W. Brown, M. D.,.....Waco,
T. J. Heard, M D,.....Galveston,
A. E. Carothers, M D,.....Austin.

On Organization.

L. E. Locke, M D, Chairman,.....Dallas,
F. H. Johnson, M D,.....Marshall,
J. H. Sears, M D,.....Waco,
J. S. Willis, M D,.....Waco,
D. F. Stuart, M D,.....Houston.

Publishing Finance and Claims.

J. H. Pope, M D, Chairman,.....Marshall,
A. G. Clopton, M D,.....Jefferson,
T. M. Marks. M D,.....Marshall,
A. B. Deloach, M D,.....Longview,
A. A. Terhune, M D,.....Jefferson.

Committee on Ophthalmology and Otology.

T. D. Manning, M D, Chairman,.....Waco,
C. W. Trueheart, M D,.....Galveston,
J. J. Burroughs, M D,.....Houston.

Arrangements and Invitations.

G. Dowell, M D, Chairman,.....Galveston,
S. M. Welch, M D,.....Galveston,
H. N. West, M D,.....Galveston,
C. H. Wilkerson, M D,.....Galveston,
W. D. Kelly, M D.....Galveston

Essayists.

R. H. L. Bibb, M D,.....Austin,
Robert Rutherford, M D,.....

Delegates to Virginia Medical Association.

Drs. T. J. Heard, L. E. Locke, A. W. Fennell, W. A. Archer, R. H. Jones and J. B. Robertson.

Delegates to the State Medical Society of Arkansas.

Drs. A. A. Johnston and H. K. Leake.

Delegates to the Medical Association of the State of Arkansas.

Drs. E. T. Dale and H. C. Gray.

Delegates to the Alabama State Medical Association.

Drs. T. D. Manning and L. E. Locke.

Delegates to American Medical Association, 1876.

Drs. J S Willis, A W Fennell, Geo Cupples, A M Denton, L E Locke, E P M Johnson, W H Park, B F Eads, J M Fort, J M Morrison, T W Wiley, A A Johnston, Greensville Dowell and B Powell.

Delegates to International Medical Congress, 1876.

Drs. A G Clopton, L S Rayfield, F H Johnson, T J Heard, T D Manning and J M Willis.

ALTERNATES.—Drs. Ashbel Smith, A E Carothers, G Dowell, M A Taylor, W H Park and D F Stuart.

PREFACE.

Though this volume of the Transactions appears earlier, after adjournment of the Association, than did the last, there has still been delay that can hereafter be avoided, if contributors can be induced to be more prompt in transmission of manuscript. It also required time to relieve financial embarrassment. Upon these points the Committee proposes to make a fuller report and suggest remedies, at the next session of the Association.

Some of the papers, referred by the Association to the Committee, are not published. Wherever there was any doubt as to the propriety of publishing a paper, it was submitted to each member of the Committee, separately, and without any member knowing the opinion of the others. The verdict thus arrived at was in every instance unanimous.

The Essay on "Physical, Physiological and Neural Laws," had been previously published elsewhere.

The Report of the Committee on "Diseases of Children" has never been sent to the Publishing Committee.

Dr. E. P. M. Johnson's paper on "The White and Negro Races," evinced thought and study, and was deemed worthy of consideration, but the argument being theological. rather than scientific, the article was thought inappropriate for this volume.

Several omissions in the minutes had to be filled out by the Committee, after receipt of the manuscript. This necessitated rather extensive correspondence to obtain information, which was often indefinite, at best. Doubtless omissions and other mistakes still remain, which it was entirely out of the power of the Committee to remedy.

We have received, too late for insertion in its proper place, information that provision was made for appointment of a Committee on "Ophthalmology and Otology." The names of the members of this Committee, however, will be found in the proper place.

In the table of "Errata," we have attempted to note only such as would have materially altered the authors' meaning.

Special thanks are due the following gentlemen for the interest they

manifested in contributing money, and procuring advertisements: Drs. R. H. Harrison, W. A. East, Richard Bibb, C. W. Trueheart, H. W. Brown and J. V. Childers.

The Chairman has been relieved of much of the labor incident to his duties, by the efficient aid of Dr. Marks, one of the Committee.

In conclusion, we must express our obligations to the publishers, Messrs. JENNINGS BROS., for the energy and care with which they have executed their work. Respectfully, JNO. H. POPE, M. D.,

Chairman of the Committee.

MARSHALL, TEXAS, October, 1, 1876.

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ERRATA.

For "J. W." page 17, line 3, read "J. B." For "Case," page 88, line 31, read "Cause." For "7th," page 140, line 18, read "27th." For "hot," page 141, line 8, read "cold." For "Aspergillas," page 168, line 22, read "Aspergillus." For "Settings," page 169, line 26, read "sittings." For "had *not* been," page 170, line 26, read "had been." For "Morrtson," page 206, line 2, read "Morrison."

CONSTITUITON

—OF THE—

TEXAS STATE MEDICAL ASSOCIATION.

ARTICLE I.

The name and style of this Association shall be "THE TEXAS STATE MEDICAL ASSOCIATION-

ARTICLE II.

The objects of this Association shall be, to organize the Medical Profes sion of the State in the most efficient manner possible; to encourage a high standard of professional qualification and ethics, and to promote professional brotherhood.

ARTICLE III.

There shall be only one class of members in this Association. Every regularly educated man within the limits of the State, who is a graduate of a regular Medical College in good standing, and who adopts and conforms to the Code of Ethics of the American Medical Association, shall be eilgible to membership in this body.

ARTICLE IV.

SECTION 1. The officers of this Association shall be, one President, three Vice-Presidents, one Secretary, one Treasurer, and five Censors.

SECTION 2. The President and Vice Presidents shall be elected for one year; the Secretary and Treasurer shall be elected, each, for five years, and every officer shall remain in office until his successor is duly elected and installed.

SECTION 3. The Board of Censors shall be elected at the present session of the Association; one for a period of five years; one for four years; one for three years; one for two years, and one for one year, and annually, hereafter, the vacancy occurring in the Board shall be filled by election.

ARTICLE V.

SECTION 1. It shall be the duty of the President, to preside at all meetings of the Association when present, to give the casting vote, to see that the rules of order and decorum are enforced in all deliberations of the body, to sign the approved proceedings of each meeting, and to approve such orders as may be drawn upon the Treasurer for expenditures ordered by the Association.

SECTION 2. It shall be the duty of the first Vice President to preside in the absence of the President, and in the absence of the President and first Vice President, the second Vice President shall preside, and in the absence of the President, first and second Vice Presidents, the third Vice President shall preside.

SECTION 3. In the absence of the President and all the Vice Presidents, the Association shall, by ballot, elect one of its members to preside *pro tem.*

SECTION 4. It shall be the duty of the Secretary, to keep a true and correct record of the proceedings of each meeting, preserve all books, papers and things belonging to the Archives of the Association, attest all orders drawn upon the Treasurer for moneys appropriated by the Association, keep the accounts of the Association with its members, keep a register of the members, the dates of their admission and place of residence. He shall collect all moneys due from the members, and pay the same to the Treasurer, taking his receipt therefor. He shall attend all committees that may be appointed by the Association, with such documents as may be necessary for reference; report such unfinished business of previous meetings as may appear on his books, requiring action, and attend to such other business as the Association may direct. He shall also supervise and conduct all the correspondence of the Association.

SECTION 5. It shall be the duty of the Treasurer to receive all moneys delivered to him by the Secretary, passing his receipt for the same, and to pay moneys endorsed by the President and attested by the Secretary, and if required, to give bond for the faithful performance of the duties of his office.

SECTION 6. The Board of Censors shall hold annual meetings concurrently with the annual sessions of the Association, to whom shall be referred all applications for membership, with vouchers from two members, and in each case, their decision shall be reported to the body for action. Three of their number shall constitute a quorum, and the chairman shall be designated by the President of the Association. They shall take cognizance of all offenses against the Association or its code of Ethics, and shall be authorized to strike from the list of membership all violators of its regulations, and shall report the names of individuals and the offense for which

action has been taken, immediately to the Association, at which time, or at the next meeting, all such individuals may have a right to appeal to that body.

ARTICLE VI.

Vacancies occurring in the offices of the Association shall be filled by appointment by the President.

ARTICLE VII.

County Medical Associations shall be entitled to two delegates to the meetings of this Association for every ten members comprising their societies, and one for every additional five members, and shall have two votes upon all questions; and all Medical Colleges in the State, holding charters from the State, with seven professors, shall be entitled to two votes; and no member shall be allowed to vote who is not a delegate of some Association or Medical College, except such member live in a county where no Association exists, said county delegates being entitled to one vote.

ARTICLE VIII.

SECTION 1. This Constitution shall immediately take effect from its adoption.

SECTION 2. In case of a failure of a quorum of the Board of Censors to attend at any annual meeting, it shall be the duty of the President of the Association to supply the vacancy by temporary appointment.

BY-LAWS.

ARTICLE I.

The Texas State Medical Association shall meet annually, at such time and place as may be determined by the majority of those members attending the previous meeting.

ARTICLE II.

Fifteen members, or any number over, shall constitute a quorum for business.

ARTICLE III.

The President shall call the meeting to order, cause the Secretary to read the proceedings of the previous meeting, which, after approval, shall be adopted.

ARTICLE IV.

In case there be no quorum, the meeting shall adjourn from day to day, until such quorum be had.

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meeting of this Association without special permission of the President, or from the session without the consent of the Association; the sense of the Association to be taken by vote.

ARTICLE XII.

The Secretary of the Association shall receive, as a compliment, at each annual session, a draft order from the President upon the Treasurer, for the sum of two hundred dollars, for valuable services rendered the Association; said order to be paid by the Treasurer; and he shall also be allowed to draw upon the Treasurer, as usual, for expenses incident to the office.

ARTICLE XIII.

It shall be the duty of the President, three months prior to each annual meeting of this Association, to notify, by circular, the profession of the State, (and urge attendance), and county organizations throughout the State.

ARTICLE V.

The fee of admission shall be five dollars, U. S. currency, and the annual dues of each member, two dollars and fifty cents, U. S. currency.

ARTICLE VI.

The usual parliamentary rules governing deliberative bodies shall govern the business workings of this Association.

ARTICLE VII.

All questions of business before this Association shall be determined by a majority of the votes present, except as to censure or expulsion of a member, in which case a two-thirds vote shall be required.

ARTICLE VIII.

SECTION 1. The President shall, at each annual meeting, appoint the folfowing standing committees, consisting of not less than three nor more than five members each, to-wit:

1.—Committee on Science and Progress of Medicine.
2.—Committee on Publication, Finance and Claims.
3.—Committee on Record of Cases.
4.—Committee on Indigenous Medical Resources of the State.
5.—Committee on Arrangements and Invitations.

SECTION 2. The Committee on Science and Progress of Medicine may collect and preserve such specimens and publications of interest, as may be of benefit to the Association, and render such aid, by lecture or otherwise, as may be required. It shall be the duty of said committee to keep a record of such discoveries or result of practice as may be made before this Association by its members.

SECTION 3. The Committee on Publication, Finance and Claims shall procure such printing as the Association may order; investigate any claims that may be preferred, and report, annually, the financial condition of the Association, receipts, expenditures, etc., as exhibited by the books of the Secretary and Treasurer.

ARTICLE IX.

It shall be the duty of the President to deliver, at each annual meeting of this Association, an address, and, in addition, the Association shall elect by ballot, one member to read an essay upon some medical subject of his own selection.

ARTICLE X.

A committee of one member from each county represented shall constitute a Committee on Nominations for officers and place of meeting. Said committee shall report action one day prior to adjournment.

ARTICLE XI.

No member of this Association, or delegate, shall absent himself from a

meeting of this Association without special permission of the President, or from the session without the consent of the Association; the sense of the Association to be taken by vote.

ARTICLE XII.

The Secretary of the Association shall receive, as a compliment, at each annual session, a draft order from the President upon the Treasurer, for the sum of two hundred dollars, for valuable services rendered the Association; said order to be paid by the Treasurer; and he shall also be allowed to draw upon the Treasurer, as usual, for expenses incident to the office.

ARTICLE XIII.

It shall be the duty of the President, three months prior to each annual meeting of this Association, to notify, by circular, the profession of the State, (and urge attendance), and county organizations throughout the State.

MINUTES

—OF THE—

EIGHTH ANNUAL SESSION.

MARSHALL, Tuesday, April 4th, 1876.

The Association met in the Opera House at 10 o'clock A. M.

The President, Dr. H. W. Brown; 2nd Vice President, Dr. M. A. Taylor; 3rd Vice President, Dr. R. H. Harrison; Treasurer, Dr. J. Larendon; Secretary, Dr. W. A. East, and a large number of members present.

Prayer by the Rev. Dr. Broughton.

Roll called.

The President announced a quorum present, and the Association ready for business.

On motion, the reading of the minutes of the 7th annual session was dispensed with, except in so far as members of the Association desired to call special attention to the same with the view of altering or amending them.

Dr. E. P. M. Johnson, Chairman of the Committee of Arrangements, delivered the following address of welcome:

Mr. President and Gentlemen of the State Medical Association:

It becomes my duty, as Chairman of the Committee of Arrangements, to welcome you on this, the annual convocation of our Association. Language would fail us to express the pleasure we anticipate during your sojourn with us; and when it shall have closed, it is to be hoped that each one will feel and realize that he has been a beneficiary by coming and joining in the deliberations of this meeting.

But my address shall be purely one of welcome. To mar the social feel-

ing, which should characterize the assembling of this great humanitarian association, by a dry disquisition on medicine, would be to misapprehend the time, place and audience.

We come here not to whet our scalpels, but to sharpen our hearts for our work through the helpful countenances of one another.

If, by my address of welcome, I shall be able in any way to inaugurate this feeling of mutual helpfulness, my purpose shall be attained.

The Mussulman resorts at times to Mecca, his sacred city, not to school himself in the tenets of the prophet, but to catch from the sacred surroundings the spirit of Mahommedanism. The jew was wont at the holy feasts to see through type and symbol the inner significance of his faith; so we have come up to our annual Association, the design of which lies not so much in the increase of medical knowledge as in the indescribable, yet mighty power, of communion to inspire us with the grand spirit of our mission.

What is the importance of that spirit? The minister who has turned his thoughts to psychology and has imbibed none of the spirit which was in the suffering son of God, and has no yearning for the souls of sorrowing men, is not more disqualified for the pulpit and the scene of death, than a heartless and money-loving physician is for the sick bed. Both would have totally misconceived their respective work.

That a physician should have the professional value of his services none will deny; but when, through quackeries and nostrums and false hopes, he attempts to prey on the credulity of those, who, through their helplessness, grasp eagerly at straws, he ceases to be humanitarian, and presents us with the disgusting spectacle of one sacrificing the expectations and longings of immortal souls, for sordid gain. How foreign is this to the work of building up wasted energies and binding up shattered lives?

Next to the medicine of the soul is that of the body. Next to the binder of souls is the healer of bodies. How necessary that the one and the other have the sympathetic spirit of his mission. Let us do honor to our noble profession by bestowing more than we receive. Would that I could describe this spirit! How helpful it is to the sufferer; how it effects the inner character of the possessor; how it dispenses blessing wherever it goes; how it unites within itself all the sweet and tender sympathies of life; how, with its touch, it makes the whole world akin. I have given you my estimate of it. Armed with it the physician stands only a little lower than the minister of "good tidings." I would that we might incorporate into our lives and make our own forever that self sacrificing devotion which has occasionally characterized our fraternity in the great plagues and distresses of the world. What a field we have for the display of this spirit! The storms along our coast and fevers in our cities are calls hard to resist.

If devotion to the cause of humanity is so grand in conception and withal so imperative in claims upon our profession, we ought to make these convocations contribute largely to the strengthening of such spirit among ourselves. By this indescribable power and influence of association, much

strength and influence have been given to all bodies, whose grand objects have been to improve the condition of the human race.

Ecclesiastical bodies, whose calling is to reform a world of wickedness, and advance the cause of the holy religion of Jesus Christ, have thier biennial, annual and quarterly convocations, where this power of communion is brought to bear, together with the strengthening influence of the spirit of the Holy One; they return to tkeir respective fields of labor greatly strengthened and better prepared to do good and true work in the divine cause.

The same may be said in regard to all benevolent societies. Masonry, which is said to be the purest of all benevolent societies, organized by man, has for its chief objects, "brotherly love, relief and truth." With these jewels man may rise in the scale of morality, until it culminates in the topmost round in the ladder of faith, and the brightest gem that sparkles in the christian diadem. So with Odd-Fellowship, Temperance, Granges, etc., All have found by coming together in these meetings their cause has been strengthened, that an impetus has been given to their onward march. We ought to go down to our homes with a tenderer, mellower, divine conception of our work. Let it be known to the world that this Association is not to increase the pay of physicians, but to conceive and execute plans by which disease and suffering may be kept from the confines of our great State. Let us say "there is prudence in our endeavors to preserve the health of our homes, only when no safeguard has been left unused."

But I turn from this subject to the pleasure of welcoming you to Marshall. We welcome you first in the name of the Harrison County Medical Society, and in the name of our corporate authorities. We welcome you in the name of our citizens whose homes are your homes whilst you tarry with us. And last, but not least, in the name of the ladies, of which our little city boasts of the most beautiful in the State; but of this we leave you to judge. We present you with the freedom of our city. You have the privilege of walking our streets, entering our homes, and sharing at our hands such fare as misfortune has left us. Welcome, thrice welcome to Marshall.

Dr. Brown replied to Dr. Johnson's address, thanking him and the Harrison County Medical Society for the reception given the Texas State Medical Association.

Prof. D. W. Yandell, of Louisville, Ky., was introduced by Dr. Johnson, and a hearty welcome was extended by President Brown, assuring him that his name was familiar to the fraternity of Texas. He was invited to participate in the meetings.

Prof. Yandell accepted the invitation in a few happy remarks upon the pleasure it gave him to meet his brethren in Texas. He said: "You are the most liberal people I ever met. You

offer your hearts, your hands, your halls and your streets. When I received your letter inviting me to your Association, my wife was not willing for me to come, fearing I would not return. I come to meet the Texas State Medical Association, to see my old acquaintances, and make new ones; to join in promoting the objects of the Association. I thank the Association."

Dr. M. A. Taylor moved that representatives of the press be invited to take seats in the Association. Carried.

On motion of Dr. Robertson, all physicians in good standing were invited to take seats, without the right to participate in the business of the Association.

Reports of special and standing committees were laid over until the arrival of members.

Dr. J. J. Burroughs, Chairman of Board of Censors, announced to the Association that the Board was ready to receive applications for membership.

On motion of Dr. J. M. Ross, the name of James Cowling, of Houston, who was elected a member of the Association at the 7th annual session, was again referred to the Committee on Credentials.

Resolved, That a committee of three be appointed by the Chair to draft suitable resolutions on the death of any member, and report the same before the adjournment of the Association. R. H. L. Bibb.

REPORT OF BOARD OF CENSORS.

We respectfully submit the following names for permanent membership: W. P. Jose and J. H. Taylor, of Hallville; B. Powell, Houston; W. D. Jones, Waxahachie; A. P. Brown, Jefferson; A. E. Carothers, Austin; W. A. Bell, Farmersville; H. C. Gray, Scottsville; S. F. Vaughan and W. W. Perry, Jonesville; T. M. Marks and E. B. Blocker, Marshall; T. E. Powell, Waskom's Station; A. W. Ellett, Jonesville.

J. J. Burroughs, Chairman.

Report of the Waco Medical Society was read by the Secretary, received and referred to Publishing Committee:

Mr. President and Gentlemen of the Texas State Medical Association:

In compliance with resolutions passed at your last session, (Pub. Trans., 1875), I herewith submit, in brief, a synopsis of the proceedings of our County Association, for 1875:

Active members, January 1st, 1875..... 14

Active members admitted during 1875	6
" " died " "	2
" " withdrawn " "	1
Enrolled members, Dec. 31st, 1875	19
Total membership	36
Average attendance at regular meetings	7 4-19
Number regular meetings held	36
" called " ".	2

Called meetings were for the purpose of paying respect to deceased brothers, Drs. Durham and Gunnell.

During the year there were quite a number of interesting cases reported.

The following twenty-four questions were thoroughly discussed, viz: Epilepsy, Sleep, Small-pox, Science and Progress of Medicine, Albuminuria; Cystitis, chronic and acute; Diabetes Mellitus; the Liver, its anatomy and functions; Blood Letting, local and general; the Kidney, its functions and diseases; Erysipelas, Hysteria, Genesis, Hallucination, Animal Biology, Osteogenesis, Hydrargyrum, Bromide of Potassium and Ergot, Dentition, Diphtheria and Modus Operandi of Conception.

FINANCIAL REPORT.

Dues received for 1875	$ 45 00
Initiation fees received for 1875	6 00
Received on back dues (1874)	9 00
Total receipts, 1875	$ 60 00
Balance on hand from 1874	30 15
Total on hand	$ 90 15
Amount expended during 1875	53 95
Balance on hand	$ 36 20

Of amount expended, $45 00 were sent to the Texas State Medical Association, for which we recived, in return, two copies of Transactions, 1874, and thirty-five copies of Transactions, 1875. Balance of amount expended was on account of incidental expenses.

The above shows our finances to be in a healthy condition; and we are glad to report that there was not a single delinquent for 1875.

SANITARY.

Have not sufficient data to compile a reliable report on this subject.

From the city sexton's report, I am able to give statistics of deaths in the city: White, 65; colored, 31. Males, 60; females, 36. Male adults, 28; female abults, 21. Total adults, 49. Male children, 27; female children, 20. Total children, 47. Total number of deaths, 96.

Estimating the population at 8000, the deaths are 1 in 83.33 of population, or 12 per 1,000.

Causes of death not accurately kept. Greatest number of deaths from any one disease was Pneumonia.

I am inclined to think the above figures are incorrect, as relates to color and sex; though the aggregate gives the proper death rate of the city for 1875.

The city and county, during the year, were remarkably healthy. No epidemics prevailed. No record of births kept, and I have no idea as to the number.

I beg leave to suggest:

1st. That each county should be urged to keep a record of all births, deaths, cause of death, age, color, sex, etc. This would afford the county and medical profession an immense amount of valuable information. The local societies would be able to give correct annual reports of the health of the county.

2nd. That every case to be read, or case reported to the Sate Medical Association, should first come before the local society, where there is such, and receive its endorsement, before it can be entertained by the State Association.

This would relieve that body of an immense burden, and materially aid the Secretary and Publishing Committee.

T. E. UNDERWOOD, M. D., Rec. Sec'y,, W. M. A.

Telegram from the Kentucky State Medical Society, greeting their brethren of the Lone Star State.

DALLAS, TEXAS, April 3, 1876.

Dr. W. A. East, M. D., Secretary Texas State Medical Association:

DEAR SIR:—You will please be kind enough to erase my name from roll of membership of the Texas State Medical Association, and oblige me., I have quit the practice of medicine entirely, and have engaged in other business. Yours, truly, J. T. HUSSEY.

Request received, and Dr. Hussey's name ordered to be erased from the roll of members, upon the payment of any back dues.

Telegram from the Tennessee Medical Society, greeting the Texas State Medical Association.

Telegram from Dr. J. Marion Sims, regretting that he could not attend.

Greetings were sent to the Kentucky State Medical Association, and the Tennessee State Medical Society, both in session.

Letters were read from Drs. Richardson, Chaille, Jones and Logan, of the University of Louisiana; Paul F. Eve, of Nashville; D. W. Yandell and E. S. Gailliard, of Louisville; B. A. Pope, of New Orleans; Davis, Cabell and Harrison, of the University of Virginia; Hunter McGuire, of Virginia; Hodges,

of St. Louis; Easley, of Little Rock; Gross and Brinton, of Philadelphia, and Cochran, of Mobile.

The following practical suggestions are extracted from some of these letters:

Prof. T. G. Richardson writes:

"I suggest that a resolution be introduced, deprecating, in plain and decided terms, the easy method by which candidates are sometimes rushed into the ranks of the profession, before it is possible that they can have obtained the requisite amount of theoretical and practical knowledge for so serious and responsible a position."

Dr. S. E. Chaille says:

"Pardon me for suggesting that my attention has been called forcibly to the fact that the only State Medical Societies which, thus far in the history of the United States, have accomplished anything worthy of record, have been those which the State governments and laws have encouraged and supported. The State Medical Society of New York has long sustained a very enviable reputation; and the annual volume of its published Transactions deserves the highest commendation. This is chiefly due to the fact that these published Transactions are public documents, printed at the expense of the State, which in other ways, encourages the usefulness of the State Medical Society."

On motion of Dr. Ford, a committee of five members was appointed to revise the Minutes of the Association. Committee: Dr. J. B. Robertson, Chairman; J. M. Ross; Thos. W. Wiley; R. H. Harrison and L. Hudspeth.

Adjourned until 2 p. m.

AFTERNOON SESSION.

Association met pursuant to adjournment.

Roll called.

Minutes of morning session omitted.

The Board of Censors report:

We have examined credentials of delegates on list presented and vouch for their accuracy. J. J. BURROUGHS, Chairman.

Whereupon the following gentlemen were admitted to seats as delegates from their respective Associations: Drs. James A. Dibrell and S. W. Vaughan, of the Arkansas State Medical

Association; Dr. J. H. Lenow, of the State Medical Society of Arkansas; Dr. G. W. Wooten, of the Texarkana Medical Association.

Dr. E. P. M. Johnson offered a synopsis of a report on the Anatomical and Physiological differences of the white and black races. Part of the report by Dr. W. J. Burt.

Dr. John H. Pope read an able paper upon the Science and Progress of Medicine.

Papers referred to the Committee on Publication.

The Treasurer reports as follows:

TREASURER'S REPORT.

To the President and Members of the Texas State Medical Association:

Your Treasurer begs leave to report the following Receipts and Disbursements of cash during the year ending in April, 1876:

Amounts received from members and local Medical Societies, for Initiation Fees and Annual Dues			$ 419 50

AMOUNTS DISBURSED DURING THE YEAR AS FOLLOWS:

April 9.	By cash paid W. A. East, Secretary	$ 200 00	
	Cash paid R. H. Harrison, for balance due on publication of Transactions of 1874	89 50	
June 17.	Cash for Postage Stamps and Envelopes	6 00	
July 30.	Paid R. H. Harrison on account of publication of Proceedings of 1875	95 00	
	Cash paid, Freight and Drayage on one box Transactions	1 00	
	For one Blank Book	1 75	
			$ 393 25

RECAPITULATION:

Total amount received	$ 419 50
" " paid out	393 25
Balance on hand	$ 26 25
Deduct balance due Treasurer, as per last report	4 35
Leaving balance actually on hand	$ 21 90

Respectfully submitted,

J. LARENDON, M. D., Treasurer,
T. S. M. Association.

Dr. T. J. Heard presented the following paper (Judicial Council or Organization) which was read by the Secretary:

JUDICIAL COUNCIL.

A Council, consisting of twenty-one members, shall be appointed by the Nominating Committee, whose duty it shall be to take congnizance of, and decide, all questions of an Ethical or Judicial character, that may arise in connection with the Association. Of the twenty-one members of the Council first appointed, the seven first named on the list shall hold office for one year, and the second seven named shall hold office two years.

With these exceptions the term of office of members of the Council shall be three years, being appointed by the Nominating Committee, annually.

The said Council shall organize by choosing a President and Secretary, and shall keep a permanent record of its proceedings. The decisions of said Council, on all matters referred to it by the Association, shall be final, and shall be reported to the Association at the earliest practicable moment.

All questions of a personal character, including complaints and protests, and all questions on credentials, shall be referred at once, after the report of the Committee of Arrangements or other presentation, to the Judicial Council, and without discussion.

SECTIONS.

The general meeting of the Association shall be restricted to the morning sessions; and the afternoon sessions, commencing at three o'clock, shall be devoted to the hearing of reports and papers and their consideration, in the following Sections:

1st—Practical Medicine, Materia Medica, and Physiology.

2nd—Obstetrics, and Diseases of Women and Children.

3rd—Surgery and Anatomy.

4th—Medical Jurisprudence, Chemistry, and Psychology.

5th—State Medicine, and Public Hygiene.

The Chairman and Secretary of the several sections shall, like other officers of the Association, be nominated by the special committee of one member from each county represented at the meeting, and elected by a vote on a general ticket. They shall hold their office until the close of the proper business of the annual meeting, next succeeding their election, and until their successors are appointed.

The section on State Medicine and Public Hygiene shall be composed of one member from each county, representing as far as practicable, the County Board of Health. The officers of this section to be also designated by the Committee of Nomination.

The Chairmen of the several sections shall prepare, and read in the general sections of the Association, papers on the advance and discoveries of the past year in the branch of science, included in their respective sections; the reading of such papers not to occupy longer than forty minutes for each.

Papers appropriate to the several sections, in order to secure consideration and action, must be sent to the Secretary of the appropriate sections at

least one month before the meeting which is to act upon them. It shall be the duty of the Secretary, to whom such papers are sent, to examine them with care, and, with the advice of the Chairman of his section, to determine the time and order of their presentation, and to give due notice of the same; and after their full examination and discussion by the section, they shall be sent to the permanent Secretary of the Association.

No paper shall be read before either of the sections, the reading of which occupies more than twenty minutes. Such papers shall be referred by the section to sub-committees, especially appointed for their examination. The sub-committees shall be allowed thirty days for such examination; at the end of which time they shall forward the papers to the Committee of Publication, with such recommendations as they may deem proper. The author of such papers, however, may read abstracts before the section within the allotted twenty minutes. No member shall address the section more than once upon the same subject, nor speak longer than fifteen minutes without unanimous consent.

All papers presented directly to the Association, and other matters, may, at the discretion of the Association, be referred to the various sections for their consideration and report.

STANDING COMMITTEES.

The following are the standing committees of the Association, to be filled by the Committee on Nominations, and to report at the next annual meeting subsequent to their appointment, viz: Committee of Arrangements; Committee of Publication; Committee on Prize Essays, and Committee on Texas State Medical Necrology.

The Committee of Publication shall append to each volume of the Transactions hereafter published, a copy of the Constitution, By-Laws, Code of Ethics of the Association, and a complete list of all members in full fellowship, and their respective places of abode.

It shall print conspicuously at the beginning of each volume of the Transactions, the following disclaimer, viz: The Texas State Medical Association, although formally accepting and publishing the reports of the various standing committees, holds itself wholly irresponsible for the opinions, theories, or criticisms therein contained, except when otherwise decided by special resolution.

The Committee on Prize Essays shall consist of five members, residing in the same neighborhood, whose duty it shall be, in the interval between the present and the next succeeding annual sessions, to receive original papers upon any medical subject, from any person who may choose to send them; to decide upon the merits of these papers, and to select for presentation to the Association, at its next session, such as they may deem worthy of being thus presented. The Committee shall have power to form such regulations, as to the mode in which the papers are to be presented, and as to the observing of secrecy, as they may think proper; and also to award two prizes, of one hundred dollars each, to the best two original

communications reported on favorably by them, and directed by the Association to be published.

The Committe on Texas State Medical Necrology shall consist of one member for each county represented in the Association, whose duty it shall be to procure memorials of the eminent and worthy dead among the distinguished physicians of their respective counties, and transmit them to the chairman of this committee, on or before the first of April of each and every year.

ORDINANCES.

Resolved, That the several Sections of this Association be requested, in the future, to refer no papers or reports to the Committee of Publication, except such as can be fairly classed under one of the three following heads, viz:

1st. Such as may contain and establish *positively* new facts, modes of practice, or principles of real value.

2nd. Such as may contain the results of well-devised original experimental researches.

3rd. Such as present so complete a review of the facts on any particular subject as to enable the writer to deduce therefrom legitimate conclusions of importance.

Resolved, That the several sections be requested, in the future, to refer all such papers as may be presented to them for examination by this Association, that contain matter of more or less value, and yet cannot be fairly ranked under either of the heads mentioned in the foregoing resolution, back to their authors with the recommendation that they be published in such regular medical periodicals as said author may select, with the privilege of placing at the head of such papers: "Read to the ——— ——— Section of the Texas State Medical Association on the —— day of ——— 18——.

THE PUBLICATION OF PAPERS AND REPORTS.

No paper or report shall be entitled to publication in the volume, for the year in which it shall be presented to the Association, unless it be placed in the hands of the Committee of Publication on or before the first day of July. It must also be so prepared as to require no material alteration or addition at the hands of its author.

Authors of papers are required to return their proofs within two weeks after their reception; otherwise they will be passed over and omitted from the volume.

The Committee of Publication shall have full discretionary power to omit from the published Transactions, in part, or in whole, any paper that may be referred to it by the Association or either of the sections, unless specially instructed to the contrary by vote of the Association.

On motion of Dr. R. H. Harrison, Dr. Heard's paper was

referred to a committee of five, to examine and report any modifications thereof that might be deemed necessary, before submitting it to the final action of the Association.

Committee—Drs. A. G. Clopton, R. H. Harrison, J. W. Robertson, J. M. Ross and W. H. Park.

A paper, "Molecular motion in the colorless blood corpuscles," by Bat Smith, M. D., of Eagle Lake, Texas, and one on the circulation in the kidneys, by the same, was read. Referred to Publication Committee, with discretionary power.

Upon application, and favorable report of the Board of Censors, the following societies were admitted: Dallas County Medical Society, Panola County Medical Society, Ellis County Medical Society, and Tekarkana Medical Society.

On motion of Dr. J. B. Robertson, Dr. T. J. Heard was added to the Memorial Committee.

Dr. J. B. Robertson offered the following preamble and resolution:

WHEREAS, The frequent and increasing deaths by the incompetency of pharmaceutists, apothecaries and druggists, demands of the Medical Association of the State an earnest effort to protect the people from this evil; be it therefore

Resolved, That the attention of the Legislature be respectfully called to this evil, and such legislation asked as will secure the proper competency of all persons following these professions. Such legislation to include a like competency of all persons employed to fill prescriptions; and to prevent the sale of morphine, strychnine, opium and arsenic, except upon the prescription of a physician.

Adopted.

Motion to adjourn until 7:30 p. m.

7.30 P. M.

Association met and was called to order by the 2nd Vice President, Dr. M. A. Taylor.

The President, Dr. H. W. Brown, delivered the annual address to a large and appreciative audience.

After Dr. Brown's address, Prof. Yandell made a few interesting remarks.

Adjourned until 10 a. m. Wednesday.

SECOND DAY—MORNING SESSION.

Wednesday, April 5th, 1876.

The Association met at 10 o'clock, a. m., in the Court House.

Prayer by Rev. Dr. Broughton.

Roll called.

Minutes of yesterday read and adopted.

Committee on Credentials reported favorably the following gentlemen, for permanent membership:

Drs. James A. Matthews, Kosse; R. DeJernette, Jefferson; A. Sears, Marshall; E. T. Dale, Texarkana; Saml. R. Burroughs, Guy's Store, Leon county; J. S. Saunders, Bonham; L. E. Locke and H. K. Leake, Dallas; T. C. Foard, Burksville; S. P. Adams, Mount Pleasant; Felix H. Johnson, Marshall; F. M. Wortham, Pennington; James W. Fennell, Seguin; M. D. Sterrett, Grand Bluff; D. W. Yandell, Louisville, Ky.; Charles Brooke, Marshall; S. N. Denton, San Marcos; S. D. Thruston, Dallas; J. K. Davidson, Alleyton.

Also the following societies: Gregg County Medical Society, Titus County Medical Society, Medical and Surgical Association of the city of Dallas, Guadalupe County Medical Association, Nacogdoches County Medical Association, Jasper and Newton Counties Medical Association, Limestone County Medical Association, Dallas County Medical Association, Hays County Medical Association, Panola County Medical Society.

On motion of Dr. T. J. Heard, the special committee appointed at Austin to prepare a history of medical progress in Texas for the Centennial, be amended, by the insertion of the name of Dr. Ashbell Smith for that of Dr. R. H. Jones.

Report on Climatology and Epidemics, by Drs. J. T. Norris and John R. Taylor, was read by the Secretary, and on motion was referred to Publication Committee.

Dr. T. J. Heard presented a paper on Diphtheria, with cases and treatment.

Dr. Greensville Dowell, a paper on dislocations of the Humerus, with diagnostic signs, and cases treated by a new method.

Dr. A. A. Johnson moved to refer Dr. Dowell's paper to the proper committee.

Dr. Yandell desired the paper read.

Dr. Johnson withdrew his motion, and Dr. Dowell read his paper.

Dr. Yandell asked Dr. Dowell to explain his mode of reduction on the person.

Dr. Dowell explained his mode as requested.

Dr. John H. Pope presented a paper, contributed by Dr. A. R. Kilpatrick, of Navasota: Retention of Dead Fœtus in Utero.

On motion of Dr. B. Powell, Dr. A. E. Ford, of Lynchburg, verbally reported a case similar to Dr. Kilpatrick's.

Dr. Ford, on motion, made out his case in writing.

Dr. Pope presented other papers from Dr. Kilpatrick, as follows:

1st. Cherokee Alphabet systematically arranged with the sounds. Cherokee "Upper Case" characters, and Cherokee "Lower Case" characters.

2nd. Official report of "Rainfall" from 1870 to 1874, copied from the Surgeon General's Register, by A. M. Hobby, of Galveston, at Forts Concho, Griffin and Richardson; with the request of Dr. Kilpatrick, that the Association file it in the record of their proceedings for reference in future years.

3rd. A brief description of the oldest medical work in the world, written by Hermes Tresmegistus, 1500 years before Christ; procured at Thebes in Egypt in 1872, by George Moritz Ebers, the distinguished Archaeologist of Berlin, Prussia; with a brief sketch of William Caxton, the printer.

Dr. T. D. Manning read a paper on Amblyopia.

On motion all of the above papers were referred to the Publication Committee.

Dr. Yandell said he was so pleased with the character of the papers of the Association, that he desired to have an abstract of them for his journal.

On motion of Dr. East, Dr. Yandell's request was granted.

Association adjourned to meet at 2 o'clock p. m.

AFTERNOON SESSION.

The Association met at 2 o'clock p. m.

Dr. Dowell addressed the Association, as announced on yesterday.

Subject: "Physical, Physiological and Neural Laws."

The President appointed the Nominating Committee, consisting of one delegate from each county represented.

The committee retired, and pending its deliberations, the Association took a recess.

The Committee on Nominations reported as follows:

On motion Dr. A. G. Clopton was elected Chairman, and Dr. W. H. Park, Secretary.

The names of Drs. Harrison, of Columbus; Taylor, of Austin; Ross, of Brenham; Pope, of Marshall, and Wooten, of Austin, were placed in nomination for President.

Motion made that a majority elect. Motion prevailed.

Also moved and carried that the name having the least vote be dropped at each ballot, until an election was made.

On ballot, Dr. R. H. Harrison was elected, and the election made unanimous.

Moved and carried to elect the Vice Presidents *viva voce.*

Dr. John H. Pope was elected 1st Vice President, Dr. Thos. W. Wiley 2nd Vice President, Dr. W. H. Park 3rd Vice President.

Dr. A. E. Carothers was elected one of the Censors, to fill the vacancy in the Board, caused by the expiration of the term of Dr. J. F. Matchett.

The city of Galveston chosen as the next place of meeting; the first Tuesday in April, 1877, the time.

Dr. H. W. Brown, the retiring President, invited the President elect to the chair.

Dr. Harrison thanked the Association for the honor, and at once assumed the duties of his office.

Drs. Pope, Wiley, Park, and Carothers, each thanked the Association for the honor conferred.

On motion of Dr. J. B. Robertson, the Committee of Publication were instructed to publish the Constitution and By-Laws, on the first pages of the volume of Transactions of this session, and that they also have published in such part of the volume as may be most convenient, the name, county and post-office of all

the members; provided, no member's name be published who is in arrears for dues.

Adjourned until 9 o'clock, a. m., to-morrow.

THIRD DAY—MORNING SESSION.

Thursday, April 6th, 1876.

The Association met at 9 o'clock, a. m.

Prayer by Rev. Dr. Broughton.

Roll called.

Minutes of yesterday read and adopted.

It being the hour, as announced on yesterday, for Dr. S. R. Burroughs, of Leon county, to read his paper—"The Hymen, its malformations, malpositions, and its influence, as a concomitant cause of laceration of the perineum"—it was called for, and after reading referred to the proper committee.

Dr. Holcom, of Ellis county, reported two cases of Hip Joint disease, which was referred to Publication Committee.

Resolution by Dr. J. M. Willis:

Resolved, That all members of this Association in arrears for dues, over fifteen months, shall stand suspended, and their names be dropped from the roll; the same to be reinstated at any time by paying up all back dues. It shall be the duty of the Secretary to notify all members behind for dues, immediately after the adjournment of this body, and request immediate payment.

On motion, the resolution was referred to special committee of five.

The President appointed Drs. J. M. Willis, H. C. Gray, L. Hudspeth, T. J. Heard and E. P. M. Johnson.

Dr. Long presented a paper on Chronic Cystitis, treated by injection of Nitrate of Silver, by Drs. Murph and Long, of Lynn Flat, Texas.

Referred to Publication Committee.

The special committee to whom was referred the resolution in relation to dues, suspension of members, etc., report:

We recommend the adoption of the same.

J. M. Willis, Chairman of Committee.

Dr. T. J. Heard presented a Meteorological report from the U. S. Signal office, Galveston, Texas, by Robert Reeder, observer, from April 8, 1875, to March 30th, 1876, inclusive. Also a classification of diseases of persons died during each month, from April 1st, 1875, to March 31st, 1876, showing the total number of males and females: total number of whites and blacks; the nativity of each person, and the average age of each.

Preamble and Resolution:

WHEREAS, The season for the development of such epidemic, as well as endemic, diseases as the different parts of our State may be visited by approaches, and

WHEREAS, The proper police, hygiene and sanitary regulations, to be fully effective in preventing or mitigating the evils of such visitations, must be adopted and enforced at an early period of the season; be it therefore

Resolved, That the State Medical Association, anxious as it is to do all in its power to prevent the appearance of yellow-fever or other malignant disease, or to mitigate their severity should any portion of our State be visited; do hereby advise and earnestly urge upon the authorities and people of all localities liable to be visited by such diseases, the prompt adoption and rigid enforcement of proper sanitary regulations, and to appoint Boards of Health, through whom the proper rules for ventilation, fumigation and disinfection can be efficiently enforced.

Adopted and referred to the committee on State Board of Health.

Dr. W. H. Park, presented a paper on Lithotomy, which was referred to the Publication Committee.

Dr. T. D. Wooten, of Austin, assisted by Dr. A. E. Carothers of Austin, removed a part of the upper mxaillary bone from a boy sixteen years of age, in presence of the Association.

Dr. M. D. Jones offered the following resolution:

That the Committee on Legislation be instructed to request the Legisla- [illegible] to amend the act to regulate the Practice of Medicine in the State of Texas requiring the County Court Clerks to furnish the Secretary of State with a list of all the registered physicians in each and every county in the [illegible]

[illegible] Dr. M. A. Taylor:

[illegible] That the hour of 4 p. m. be specially set for the lecture of Prof. [illegible] the present mode of treating Syphilis.

The committee appointed to report resolutions on the death of Dr. G. W. Peete, respectfully report,

That, owing to the fact that a competent personal friend is engaged in preparing an acceptable and proper obituary notice, to be published in our proceedings, we report a short resolution and ask that it be adopted.

Resolved, That it is with deep regret we report the demise of that high-toned medical gentleman, Dr. G. W. Peete, who fell at his post as Health Officer, at Galveston, Texas, during the terrible storm in September last. Dr. Peete was a man of rare excellence, as a medical officer, friend, and gentlemen. As the officer, always prompt and faithful. In his social relations, kind, true, and always urbane. We deeply lament the loss of this great and useful man, and extend to his bereaved family our heart-felt sympathy in their great loss.

Adopted.

This, 11:30 a. m., being the time for Dr. T. D. Wooten to read his paper, "Report on Gynæcology," he was called.

Dr. Wooten read his report and it was referred to the Publication Comitttee.

Adjourned until 2 o'clock p. m.

AFTERNOON SESSION.

Association met at 2 o'clock p. m.

Roll called.

Dr. M. A. Taylor presented a paper on diseases of children, which was referred to Publication Committee.

Dr. R. H. Harrison presented and read his report as chairman of the Committee on Finance and Publication; which, on motion of Dr. M. A. Taylor, was ordered spread upon the minutes:

The volume of Transactions for 1875 comprises the fruits of the Committee's labors for the current year; and is in the hands of members of the Association—defective and unsatisfactory in many particulars, it is true; but unquestionably an improvement, in every respect, upon our former issues.

The difficulties, under which the committee labored, in the performance of its duties, and which contributed greatly to these defects, were partially indicated in its prefatory report to the volume. It is proper to speak of them more specially now.

Through the negligence and proverbial "inattention of members of our profession to their pecuniary affairs," very many members of the Association had become largely in arrears for annual dues; our Treasurer's statement, herewith submitted, showing delinquencies on this account to the amount of four hundred and twenty-three dollars, and our Treasury being proportionately anaemic, there being but ninety-five dollars therein upon which your committee could draw, while an approximate estimate, based upon calculations furnished by practical printers in the city of Austin, showed that the cost of the publication would approximate seven hundred dollars.

Of the difficulties to be encountered by your committee, then, this one amounted, in dollars and cents, to the difference between ninety-five and seven hundred; and to overcome this your committee first addressed itself, with, it must be confessed, a very slender prospect of success. It has been to a great extent overcome, and, as before stated, the result is in your hands.

The effort to accomplish this financial feat involved your committee in an extensive and protracted correspondence; first, with the view of collecting arrears of dues, etc., and then for the purpose of securing advertisements, after which to solicit contributions or advances of money from the more liberal and public spirited members, to make up the deficit.

In availing itself of this latter resource, your committee, necessarily conceded, to some extent, its right to discriminate in the rejection of papers contributed; but it is believed all the papers in this, as well as former volumes of our Transactions, will be valuable as exhibiting the status of our profession, during the infancy and early yourth of our State.

In future, it is hoped, your Publishing Committees will find it both desirable and expedient to discriminate, rigorously, in favor of such matter as is essential to the perfection of our organization, or as involves an actual contribution to the advancement of science; ortherwise the mass of matter accumulated will tax our treasury on the one hand, and reduce the value of our annual volumes on the other, greatly to the detriment of our individual interests, as well as our reputation with our professional brethren in other States.

The following statement exhibits the amounts received; the sources from which they come, and the terms upon which they were accorded, viz:

From the Treasurer, as per draft	$ 95 00
" Waco Medical Society, for extra copies	35 00
" " " " for Advertisements	25 00
" Drs. A. G. Clopton and L. S. Rayfield	20 00
" Harrison County Medical Society, to be refunded	20 00
" " " " " for Advertisements	15 00
" Dr. E. P. M. Johnson, to be refunded	10 00
" " John H. Pope, to be refunded	10 00
" " Thomas D. Wooten, to be refunded	10 00
" " T. J. Heard, for extra copies	10 00
" " G. Dowell, " " "	10 00

" " M. A. Taylor, to be refunded	10 00
" " Hillary Ryan, " "	10 00
" " W. H. Park, for extra copies and dues	10 00
" " D. F. Stuart, for dues advanced	10 00
" " J. J. Burroughs, for dues advanced	5 00
" Advertisements	189 75
Making a total of	$ 504 75

Your committee had succeeded in contracting for the work upon specifications at a lower rate than that indicated in the first estimate; and its expense account was therefore as follows:

For Paper, Envelopes, Twine, Postage Transportation and Transcribing	$ 65 32
Printing, Binding, etc	574 00
Making	$ 639 32
Apply gross total receipts as credit on the above	504 75
Leaves a balance of	$ 134 57
due and advanced by the Publishing Committee. To which add the amount due the Secretary for the year	200 00
And we have	$ 334 57

which indicates the extent of claims against, and now due by the Association, within the knowledge of your committee. It may be remarked here that there is still due the Association, on account of advertising, the sum of eighty-five dollars; twenty-five of which is tendered in surgical instruments only, the remaining sixty being repudiated, either on account of delay in getting the work out, or want of authority on the part of the contracting parties.

The Treasurer's report will, it is presumed, show the extent to which he has been able to collect from those in arrears heretofore, your committee having had no time to investigate that matter.

Your committee cannot close this report without an earnest appeal to members to attend promptly to the payment of their dues. The insignificance of the amounts due from individuals is conceded, but their prompt payment is required to make up the total, necessary to prosecute our work, decently and in order, without the trouble, confusion and vexation, invariably attending upon neglect in the premises.

All of which is respectfully submitted,

W. A. Morris, M. D.,
M. A. Taylor, M. D.,
Edward Becker, M. D.,
L. Hudspeth, M. D.,
Per R. H. Harrison, M. D., Chairman.

Resolutions to regulate the practice of Medicine in the State

of Texas were presented by Dr. M. A. Taylor, and read by the Secretary.

Dr. A. E. Carothers, by permission, presented a paper to regulate the practice of Medicine in the State of Texas, as an amendment to the paper offered by Dr. Taylor.

Both papers referred to Committee on Legislation.

Report of Committee on Prize Essay:

Mr. President:

Your committee appointed to award the prize for the best Essay upon the Eucalyptus Globulus, beg leave to report:

We regret that only one contestant presented an essay upon this important subject; viz., Dr. R. H. L. Bibb, of Austin. We have carefully read the essay, and pronounce it able, comprehensive and exhaustive, embracing its history, cultivation, botanic characters, ornamental and economic value, and sanative and medicinal properties; and take pleasure in awarding to Dr. Bibb the prize donated by our honored member, Dr. T. J. Heard, for the best essay upon this subject.

A. G. Clopton, M. D., Chairman.

By Dr. T. J. Heard.

Resolved, That the essay of Dr. Bibb, to which has been awarded the prize, be referred to Drs. J. B. Robertson, T. D. Wooten and M. A. Taylor, with instructions that they urge upon the Legislature the propriety of appropriating a sufficient sum to publish copies for general distribution throughout the State, with the view to aiding in the permanent introduction of the Eucalyptus Globulus in the malarial infested districts of Texas.

Adopted.

The committee appointed to consider the paper on Judicial Council or Organization, made the following report:

Resolved, That the subject of this and all other papers relating to, or contemplating changes in our organic law and order of business, be referred to a special committee of five, to be appointed by the President, whose duty it shall be to report to the next session of the Association.

Adopted on motion of Dr. M. A. Taylor.

Resolution by Dr. J. B. Robertson:

That Article 10 of the By-Laws be amended so as to read as follows:

Article 10. The election of officers shall take place on the third day of the session, and shall be in full session. Each member shall have the right to make any nomination, and after the second ballot, the name receiving the least number of votes shall be dropped, at each successive ballot, until an election is secured; a majority of votes cast to secure an election.

Dr. Clopton moved that the resolution be refered to the Committee on Constitution and By-Laws. Motion carried.

As announced this morning Prof. Yandell addressed the Association on Syphilis and its present mode of treatment.

Resolved, That the thanks of the Association be, and are hereby tendered Dr. D. W. Yandell, for his able, interesting and instructive lecture on Syphilis. R. H. L. BIBB.

Resolution adopted.

MARSHALL, April 6th, 1876.

Upon the application of Dr. W. H. Dial, of Marshall, the Board of Censors would respectively recommend that action upon his case be deferred until our next annual meeting. This case presents peculiar features, which are calculated to embarrass the Board in their decision. Dr. Dial's application comes recommended by five members of this Association; and a number of his neighboring physicians, who are likewise members of this body, have handed us their written protest to his admission. Recognizing the courtesy due, both to the gentlemen recommending, and those protesting, and the necessity of protecting the State Medical Association against unworthy applicants, and at the same time recognizing their duty towards the applicant, deem it prudent to defer action until the next annual meeting, at which time those who oppose his admission must come prepared to substantiate their charges and specifications.

J. J. BURROUGHS, Chairman.

Dr. Dowell stated that Dr. Dial desired to withdraw his application.

Adjourned until 9:30 o'clock, a. m., to-morrow.

FOURTH DAY—MORNING SESSION.

Friday, April 7th, 1876.

The Association met at 9:30, a. m.

Roll called.

Prayer by the Rev. Dr. Broughton.

On motion, the minutes of yesterday were omitted.

Dr. J. M. Willis reported on the Science and Progress of Medicine.

Report referred to the Committee on Publication.

Dr. Pope presented a paper from Dr. Kilpatrick, on the Indig-

enous Medical Resources of the State, addressed to the committee, Drs. Seeds, Morris, Saunders and Underwood.

Referred to the Committee on Publication.

Application of Dr. A. A. Terhune reported on favorably, and he was elected to permanent membership.

The Board of Censors, to whom was referred the time of membership of Dr. George Cupples, of San Antonio, report that it commenced in 1869, and the Association ordered that he be so informed.

On motion of Dr. Harrison, the following was adopted:

Resolved, That all physicians, recognized as members in the original organization of the Association, be permitted to perfect their membership by the payment of the regular fees and dues to date.

Report of Committee on Memorials:

Your Committee on Memorials beg to report that they have no data, and are unable to prepare such testimonials as would do justice to deceased members, and respectfully ask to be permitted the privilege of reporting at some future day to the Committee on Publication.

BIBB, for Committee.

Privilege extended.

By Dr. M. A. Taylor:

WHEREAS, The State Medical Association favors a thorough progress in Medicine and Surgery, and as this progress is aided by division into specialties, be it

Resolved, That the Association recognize a standing committee of three on Opthalmology and Otology.

Objections being made, the resolution was withdrawn.

The Board of Censors report on the application of Dr. E. P. Becton, of Sulphur Springs, Hopkins county, and recommend him for permanent membership.

Dr. Becton was elected.

Dr. Harrison, Chairman of the Committee on State Board of Health, reported as follows:

Mr. President and Gentlemen of the Texas State Medical Association:

In the discharge of the important duties committed to its care, your committee can only report a very small amount of progress, and suggest a more vigorous prosecution of the GREAT WORK entrusted to it, in the hope that its successor may attain better results than have hitherto crowned its efforts in the premises.

In the first place, a careful survey of the field of its labors discovered but

little that had been left to be done. The report submitted by its predecessors, to the last session of this Association, seemed to be ample in every particular. The question of benefits to the State was briefly, but pointedly, answered; some of the compensating benefits to the profession were also set forth. The form of the law intended to embody and confer these benefits, the law submitted to the Fourteenth Legislature; a law both liberal and compresive, with respect to the magnitude of the duties it involved; and the extent and efficiency of the force it proposed to engage in their performance, was given; and while it was not claimed that this form or outline, was not amenable to technical objection—the construction of laws upon a strictly Constitutional basis being the duty of the Legislator rather than the physician; it was claimed, and is believed, by your committee, to embody and indicate the essential points necessary to secure the greatest possible amount of benefit to the public, at the least possible cost to the State. It places all classes of medical men upon an equality before the law, requiring that the representatives of each one shall have the credentials of the school from which he assumes to come, or evidence of a satisfactory examination by a competent Board, before he shall be "allowed to tamper with human life." "It abridges no right which does not involve a wrong to others; restrains no liberty which is not license; requires from no sect or school of medicine more than the safety of the people demands, or than is required from every other sect or school." Beyond this concession of *legal* equality, (which is freely made), the Texas State Medical Association proposes to assume the duties and perform the functions of a thorough and effective organization for the protection of the public against preventable disease, in return for such benefits as a fair recognition of its service, and the advantages which such legal encouragement will afford for the prosecution of investigations and studies, in which the entire people are profoundly interested, but the burden of which naturally devolves on the medical profession.

These duties are not now performed for the State at all—nor is it proposed by any other class or school of medical men to perform them upon any terms whatever—thus leaving opposition without a vestige of foundation upon which to raise objections.

These being the facts, your committee was unable to conjecture, even, why the Fourteenth Legislature did not promptly adopt a policy so liberal and beneficent—a policy so eminently necessary, in a State with so vast a stretch of coast exposure and such an extensive network of railroads, affording rapid and intimate communication throughout all of the most populous districts. Considering the subject in connection with recent epidemic visitations to some of our fairest towns and cities, and the terrible sacrifice of life and waste of property resulting therefrom, (all of which might have been prevented), it appears to your committee that all of the best interests of the State demanded it; and the neglect of the Legislature was as inexplicable as it was without excuse.

Your committee, therefore, determined to bring the matter before the

Constitutional Convention, hoping that body would appreciate its importance sufficiently to make it the *duty* of the Legislature to provide a "uniform system of sanitary regulations" throughout the limits of the State; and accordingly prepared a "memorial" to that body, which was submitted with the endorsement of about twenty-five hundred of the best citizens of the State. The presentation of the "Memorial" resulted in sections thirty-one and thirty-two of Article sixteen of the new Constitution, which, although insufficient, indicate a peculiarity in our legislators, that it is well we should note and base our future conduct upon, viz.: that the passage of no law can be secured which popular clamor does not demand. It matters not, how patent its value may be, the "representative" legislator will consider it utopian or chimerical until it commands the sanctions of greasy Dick, grimy Tom and sooty Jim. When that is obtained, it becomes eminently practicable and necessary, however free from the commending qualities indicated.

The time has been when our law-makers were expected to be possessed of some of the elements of statesmanship; to be able to discriminate as to measures necessary or likely to confer benefits upon their constituency; but that time is passed, and the average legislator now waits as long as possible "to see which way the cat will jump" before he ventures "to make up his mind" upon the merits of any question whatever.

These facts, being patent to the most casual observation, indicate the policy which we, as representatives of the medical profession, as philanthropists, should pursue. A liberal provision for public education has been made for our people, by the founders of our State Government. Ample resources have been reserved to the State for that purpose. And yet, in the face of overwhelming necessity, the entire question has been ignored, or at best only tampered with sufficiently to afford fat places for political pets or good speculations for adventurers in that direction.

It seems that the majority of our law-makers depend upon the ignorance of our people to perpetuate their preferment, and resist education, in proportion to their greed for office. Let us, then, insist upon the speedy establishment of a system of public instruction commensurate with the means provided for its support; a system which shall embrace *all* of the elements necessary to fit the citizen for every duty of life and the means of protecting and preserving it.

Very little reflection is necessary to develop the fact that a reasonable knowledge of Physiological laws will afford the representatives of "Rational Medicine" as well as the people, an amount of protection against the insults and injuries of charlatans and pretenders, that could scarcely be attained through any other channel. If the stability of our republican form of government depends upon the intelligence of our people, the preservation of their health and the development of strength and intelligence is equally dependent upon the general diffusion of this elementary knowledge. It is, therefore, doubly our duty to insist upon the speedy adoption of measures to secure these ends. Our code of Ethics enjoins it

for the public good; and the maintenance of our position in public esteem requires it.

R. H. HARRISON, M. D.,
A. G. CLOPTON, M. D.,
L. HUDSPETH, M. D.,
M. A. TAYLOR, M. D.,
T. J. HEARD, M. D.

Resolved, That a committee of three be appointed, to report at the next meeting of the Association, to consider the physical and mental differences of the races, as applying mainly to the two great types—negro and Caucasian.

Adopted.

Committee: Drs. Ashbell Smith, W. J. Burt and J. S. Saunders.

Dr. E. P. M. Johnson:

Resolved, That County Societies be requested to furnish a list of physicians in the county, as well as of members, to give population of county, number of births, deaths, cause of death, age at death, sex and race; diseases that have prevailed; localities, with a description of the latter, in order to ascertain, if possible, the causes of disease; also, an abstract of contents of papers read, an abstract of discussions, surgical operations and results.

Adopted.

Dr. Manning operated for cataract of left eye, linear incision, upon a negro.

Dr. James W. Fennell, of Seguin, presented a paper, "Case of Tedious Labour in Primipara, with Double Vagina."

Referred to Committee on Publication.

Dr. T. J. Heard presented a paper, "Sessile Polypus of the Meatus Urinalis in a Female."

Referred to the Publishing Committee.

Dr. Hudspeth offered the following:

Resolved, That the thanks of this Association are due the retiring President, Dr. H. W. Brown, for the impartial and entirely satisfactory manner in which he has discharged every duty incumbent upon him; and for his very able and instructive annual address.

Adopted.

By Dr. Denton, of Hays:

Resolved, That the thanks of this Association are hereby tendered to the physicians and citizens of Marshall for their unsurpassed liberality and hospitality, extended to the members of this body.

Resolutions unanimously adopted prior to adjournment:

That the thanks of the State Association, now in council at Marshall, be tendered,

1st. To the Committee of Arrangements for their able, efficient and masterly efforts in administering to our wants.

2nd. To the ladies of Marshall for the reception and supper at the Opera House, and for their disinterested kindness so willingly and cordially given.

3rd. To the hosts and citizens of Marshall for the sumptuous manner in which we have been entertained.

4th. To Jennings Brothers for their liberality in publishing a full and complete list of proceedings.

5th. To the railroads that have so willingly granted reduced rates to delegates, going from and returning to their respective homes.

6th. To the Houston Telegraph, for its report of our proceedings, transmitted by its industrious and competent reporter, Mr. Fitzgerald.

7th. To the managers of the Telegraphic lines, for the free use of their wires throughout the session.

Dr. J. K. Davidson, of Alleyton, Texas, a graduate of the Medical College of Alabama, applied for membership. Recommended by Drs. Harrison and Hudspeth.

The Board of Censors approved the application, and Dr. Davidson was elected a permanent member.

Adjourned to meet in the city of Galveston the first Tuesday in April, 1877.

R. H. HARRISON, M. D., President,
T. S. M. A.

W. A. EAST, M. D., Secretary,
T. S. M. A.

PRESIDENT'S ANNUAL ADDRESS.

BY H. W. BROWN, M. D.

Ladies and Gentlemen, and Members of the Texas State Medical Association:

On the 15th day of June, 1869, in the parlor of the Hutchins House, Houston, Texas, at 6 o'clock in the evening of a day devoted chiefly to other matters than medicine—in the dusky evening, there assembled the representatives of twenty counties to confer as to the propriety of organizing a State Medical Association in Texas. Worthy men—good and true men—we believe, responding to and answering the suggestion and call of the Washington County Medical Association. Sad, it may be, to reflect, but true nevertheless, that not the interests of medicine alone could have been relied upon to effect the proposed object.

The State was in its greatest despondency, since the fetters of Mexican tyranny had been thrown off—public sentiment simply chaotic. Professional men, as in every age and circumstance, were sympathizing with, and realizing in their individual experiences, the full meed of sorrowful depression.

Never was a time better suited to call into operation those great fundamental principles, mutual council, sympathy and aid, which constitute the basis of Masonic effort, under the shadow of whose wing, as the Masonic Grand Lodge held its regular meeting, this little band of medical men, claiming interest and

membership, for the most part in both institutions, launched the little craft which has grown to the magnificent proportions you see to-day.

We cannot analyze their motives, nor would we, if it were possible, attribute them to other than as their works do indicate, viz: The promotion of harmony and efficiency in medical ranks, the prevention of disease and greater security of life and health to the public, to stay the pestilence or parry its deadly effect.

There was born of that effort an *esprit de corps*, worthy the occasion, a professional pride which embraced in far reaching aspirations the good of humanity. Doubts and fears were not wanting to damp the ardor and impair the vigor of these early efforts. The time is not so remote but we conceive the propriety of them, and pardon the implied want of faith in the profession at large, as in the potency of scientific truth, which induced them to lean for strength upon another organization whose sturdy growth is the work of centuries, whose proportions are co-extensive with civilization.

But, gentlemen, we rejoice in the fact before us; the truth so patent, that the foundations of scientific medicine are too broad and deep to require any splicing for support; too majestic to accept any parasitical allegiance.

We have assembled so many of the professional brotherhood as circumstances permit to commemorate another anniversary of that eventful meeting, charged with hopes and fears, doubts and expectations of earnest and honored movers therein, as embodying the future prospects of the profession, the embryo of organic life, upon whose growth depend the highest interests of this great commonwealth.

To that initiatory effort we ascribe much good resulting to the profession in Texas—a more extended acquaintance with each other, better relations and understanding established, higher ap-

preciation, deeper sympathies and stronger ties exist, the natural offspring of common cause and united effort. Patient and chastened toil have, from time to time, brought here their priceless trophies. Life long and dear bought experience here disclose the "log-book" with reefs and soundings of the perilous voyage.

Facilities for travel, the development of the State's great interests, agricultural, mercantile and mechanical, have conspired to quicken the growth and magnify the results incident to such germinal enterprise.

The prime movers in state organization felt, evidently, as we must to-day, that nothing of which we have a right to expect great results, can be accomplished short of labor, self-sacrifice and constant vigilance.

We note, with interest, their stirring appeal to the laborers in this common field to come up to the work, to fall into line at roll call, standing shoulder to shoulder to give aid in the great battle for truth and right. We must continue the bugle note till the scattered forces of our order are marshaled under the catholic banner of true scientific medicine.

Organization effected, the division of labor began, the sentinels and outposts were established to declare the dangers threatening, to watch the progress of events, and announce at regular times "what of the night?"

As the eighth relief, in the eighth watch, I am before you on this interesting occasion to give my answer, to make report, to deliver my annual message, to exhibit the result of my observation and reflections as to the great interests of the profession, so nearly allied to the dearest and deepest temporal interest of humanity.

We congratulate you on the unmistakable evidence of increaseing interest in the profession of Texas, the growing sympathy on the part of our people, the evident advancement in weight,

influence and importance before the great arbiter of American affairs which here presents.

From all parts of the country we have cheering reports of the profession itself, increasing skill and intelligence, greater devotion to the cause of science and better spirit. For all of which we may not fail to give due credit to the more thorough permeation of our state by an improved system and better class of medical journals. They are gaining steadily in the confidence of our professional men, and becoming not only the ventilators of theoretical speculation, but the true reflectors of professional life, giving to all the trials and disappointments, the successes and rewards of manly struggle with disease and death, developing, too, the great beauty and fitness of true ethical deportment.

While we have had no meteoric glare, no scintillations of transcendent genius to dazzle the eye and confuse the understanding of those who stand in the grosser darkness that remains, we do note increase in numbers, improvement in character, greater usefulness, better organization, steadier purpose to further the wants of the noble profession we claim, and shed her cheering brightness o'er the state we honor.

The suggestions of your first president, the offspring of deliberate survey and due understanding of the field now before us, and prompted by the best impulses of a noble heart, "true as the needle" to the interests and honor of medicine, have met no proper response, although reiterated and urged by his successors in office.

And yet we may hope the time not far distant when the profession in Texas can glory in the realization of a perfectly organized corps, reflecting every progressive step in medicine, and offering the ardent student ample facilities for the acquisition of practical knowledge.

Each succeeding officer has noted these wants and justly urged

upon us the necessity for unremitting effort, more perfect union, more extensive and zealous work in promotion of medical science, whose exalted aims compass the wants, and promise untold blessings to our race.

These earnest appeals have gone forth, scattered before the reading men of our ranks, wheresoever these broad prairies respond to the industry of man.

Have they failed in their purpose? Have these good seed been cast upon barren soil? or been trodden under foot by an unappreciating profession? Not entirely, we feel sure. The rewards have not been equal to our wishes—have not fully met the expectations of the more sanguine, perhaps. But see, in the growth of this body, the increasing interest in its action—the swelling numbers of county associations—the better working of its committees, the number of interesting reports, able, exhaustive, voluminous, sometimes to a fault, perhaps. In these and various other indications of true progress, I trust, those who heretofore have labored so zealously, will see the result of their toil, the reward of the many sacrifices they have made, the harvest of their hopes, ripening steadily and surely to the full fruition. May their zeal know no abatement; our gratitude be unfailing.

Circumstances have not favored the establishment of Medical Schools upon our soil. The requirement is not established; the time is not yet. Indeed, the vending of diplomas and manufacture of doctors has become so disgracefully common, and disgustingly easy, throughout the length and breadth of the land, that the true men of the ranks, alive to duty and obligation to humanity, as well as to professional honor, declare against any increase of chaffering and rivalry for matriculates. The artifices of trade can but lower the dignity of the profession, trail its venerable standard, and debauch the principles of regular scientific medicine, the noblest in its purposes, as the grandest in comprehensiveness of all sciences.

The profession should keep this subject under consideration, however, remembering the fact that the state of Texas has made ample provision for the establishment of a state university, so equipped and endowed as to make it, if properly managed, equal to the most extravagant wishes or demands of this great State and people. A medical department of such university, judiciously organized and conducted, will serve, as in Virginia, to elevate the standard of scientific attainment, and reflect honor, credit and beneficence upon the State.

A State medical journal that shall properly reflect the experience, progress and sentiment of the profession, is still much to be desired, but to satisfy the wishes and just claims of the Texas physician it must be first class in every particular. Such will require the material aid and intellectual support of the profession, generally. The working, observing, thinking, practical men of the ranks who constitute the bulwark of science and the palladium of our professional rights, must take hold of it.

To secure this necessary aid, we must wait the more perfect organization of societies, the greater concentration of action. We may patiently bide the time when the facilities for publication, and abundance of material offered, will at least equal those of our commercial centres. We have great need of reliable, correct statistical reports of climate, seasons, diseases in their rise, progress and treatment, as occurring in the various towns and counties of the State, and were such in the hands of a central organization with chartered rights and duties, we might boast a journal that would place the experience and practical attainments in prevention and cure of disease, in the hands of every one, and prevent or mitigate pain, suffering and disease in our limits, beyond power of computation. We owe it to ourselves and to the character of our profession, to exercise every faculty, every means, every opportunity, we may possess to further these

schemes for mutual improvement, diffusion of medical intelligence, for elevating the standard of average qualification.

True progress can never be properly estimated by reference to isolated examples of rare proficiency in any department of learning, no more than the effectiveness of an army may depend upon the superior strength and fitness of a few men; but upon the drill, training, discipline, endurance, *esprit de corps*, of the whole force.

There are other obligations upon us, such as spring from a love of truth and science, devotion to the sacred principles of our calling; those which are born of common effort to the same great end, reflecting mainly upon the credit, character and status of the profession itself; and those which are evolved by professional attainment, and called into exercise by due sense of obligation to our race, the dictates of humanity, as taught of God and illustrated by the life and example of the great physician, the Son of righteousness the brightness of whose example continues to illuminate the pathway of the true physician with lines of never fading light.

Have we faith in the science and art of Medicine? Do we believe, in her paths may be found the only security for health? the only relief for suffering humanity? the only hope of averting premature decay and death? Do you believe the foundations of our science have proven themselves to be a "rock of adamant, on whose base the proudest waves, cast up from the ocean of visionary hypothesis, have fallen only to pronounce their own epitaph, and foreshadow the destiny of their successors?" Then, indeed, it is our unmistakable duty to popularize this knowledge, to educate the people in all the established principles of Medicine, that we may save them from the dangers incident to ignorance of them—from the snares of unprincipled charlatanry; the pitfalls of the mercenary quack.

It may not be expected to suddenly or extensively revolu-

tionize public sentiment, to stay the popular thirst for something new, startling and incomprehensible: such is not history. But we have the consolation to belive that some will receive the message; some good will result from every effort, and our hearts be strengthened by the consciousness of duty fulfilled.

In this connection, pardon me for the favorable mention of the Report of your Committee on "State Board of Health." If adopted by this body and sustained by Legislative Enactment and applied by the profession, as designed, its effect will surely be to diffuse sound doctrine, wholesome truth; practical knowledge as to the protection of health, and a higher appreciation of the noble aims of our profession. I sincerely trust and believe you will give it the support it merits; nor can this Honorable body prove indifferent to the laborious and faithful service of the committee. This movement contemplates the protection of the public, by establishing a sound system of medical police, in the hands of competent health officers, to secure the public against disease, endemic and epidemic, and to advise them of those laws, which influence and control the health, growth and developement of our race. Let us do this much, if we can possibly. But can we conscientiously stay our efforts, while thousands are rushing annually into the meshes of the crafty charlatan or falling easy prey to ignorance and deception, in the which, (too often the case) we cannot free ourselves from complicity.

The people have a right to demand, and of us, protection of life and health, of more value than property, being the source of, or inseparable from, true wealth, prosperity and happiness. Not adequate security can be given, short of the strong arm of the law, for the protection of these, as of all other rights and possessions.

To whom shall they look beside? Is it sufficient to rely upon a general diffusion of intelligence? upon the education of the

masses? Alas! for humanity, look to the certificates in almost any Patent Medicine Almanac. Who has not seen the most fulsome laudation of the vilest humbuggery, attested by occupants of pulpits, often celebrated for learning. Illustrious lawyers, statesmen and politicians, whose capacity equals the intent of moulding public opinion; without mention of the vast horde of educated men, doing that which, in any other matter or concern of life, would entitle them to board in some penitentiary, viz: testifying positively to what they know nothing of.

We have good reason for the conclusion, that, as matters stand with us, those are healthiest and happiest whose education has not been such as to inspire presumption of fitness to determine matters pertaining to health. In medicine, at least, "a little learning is a dangerous thing." Scarcely any would look with faintest hope to law-makers, as such, to originate or conceive measures appropriate to this demand. Can the medical colleges be relied upon in this emergency? What is the answer of medical men, east or west, north or south, whenever appealed to? What say you, who in the great battle of life are striving, meanwhile, to elevate the standard of medical acquirement? It is a melancholy fact, that, even in the early part of the present century, the hopes and confidence of the public were so abused by the chartered institutions; college making and diploma selling became so common, as to destroy confidence entirely, and withdraw the protection so willingly proposed. Is it better today? The reply is upon every tongue before me.

We have reason to expect of medical colleges, with the appliances they possess, the influence they wield and promises made, to effect much towards elevating the general character of medical attainment. But what does the American Medical Association say in this matter? In a preamble to report of special committee received and adopted, we find the following language:

"The result of all the efforts made during the last twenty-five years to elevate the standard of medical education, through concert of action among the numerous medical colleges of this country, have proved with equal clearness that such concert of action, in an efficient manner, is unattainable." The guarantee of qualification, which the possession of a diploma should give, is therefore worthless to the public, in selecting the advice and counsel necessary to protect the best interest of life. As an able writer upon this subject has it: The parchment, as the sign of the doctor on the door, may introduce an ignorant pretender or a first-class criminal.

We would not detract from the well merited character of many noble Institutsons we may boast, their zeal and faithfulness in the cause of medical education, their earnest devotion to the interests of the profession. But were it possible to secure concert of action and strict adherence to the purpose of such colleges, viz: the better qualification of physicians, it would apply to those only who possessed their diploma, and fall short of that protection which the people have a right to expect, at the hands of our profession.

Can we expect more of voluntary societies of which we are so justly proud, whose influence, wherever felt, is recognised in the elevation of character, increased intelligence, higher appreciation of ethics, nobler impulses, and more exalted views of its membership? Here, too, we recognise the fact that their power and influence is circumscribed too nearly, yea almost entirely confined to its own adherents.

As before said, no degree of education, outside of medicine, will qualify to determine the fitness of practicing physicians. None other than medical men are proper judges in such matters; the highest cultivation in any other department of learning fails to give security against imposition. The people have a right to

demand of us—the only proper judges—that competent men only shall be allowed to treat them. It is, furthermore, our plain duty to prevent them, as we would the blind, from wrecking health, happiness and usefulness, as so often done. We have seen the impotency of all efforts in this direction, unless sustained and protected by law. In accordance with this conviction, the profession have sought that necessary aid, in the several States, since the colonies achieved their independence.

Some good has resulted from legislation already. Some evils have been lopped off, or corrected, but too few to secure the required protection to the people, or satisfy the wishes of the profession, and the wail of hope deferred, and expectation of the disappointed have come up from the length and breadth of the land. Pennsylvania, New York, Virginia, Georgia, Alabama and Texas have played the same role, and reaped like rewards. So far as I have been able to investigate, all have fallen far short of the proposed attainment.

Is it not our duty to consider, carefully, matter of so much moment, to review, reconsider the question of need, the character of efforts made, scrutinize more closely the seeming causes of failure? Yes, truly, and determine, like men, never to weary in well doing, but, bravely breasting the storm of ignorant prejudice, pride of opinion, selfish interests, and the baser instincts (which so often spring up, in fallen nature, to oppose truth and progress) continue until light dawns upon our pathway, and victory perches upon the banner of Science and Humanity. Law is but the expression of the necessities of a people, and so must change with those ever-changing necessities. To say that, because legislation has heretofore failed in its objects, though supported by the wisest and best of counselors, we should be content, and there leave the matter, is equivalent to saying that ultimate wisdom has been attained, the perfection of legislative

accomplishment arrived at—a philosophy as puerile as its promptings are unsatisfactory and mischievous. It is not true in anything claiming human interest, especially fallacious when applied to arts and sciences, morals or government of a people. Now, there must be some good reason for the failures that so universally attend all efforts made to protect the people, (medical men require none)—what are they? I believe a careful examination of the suggestions made, and laws passed (the caption in most instances giving the only clue to their intent) would satisfy any unprejudiced mind, as to the reasons of failure. And they would stand about as follows: The profession has sought to protect itself too much; to cut loose from associations, before the public, (in the eye of the world) from the horde of pretenders who do so shame our calling, and disgrace the very name, Doctor. To wrap the mantle of professional distinction about those only who deserve to wear it, despite the opinions of the people. Laudable desire, certainly, but impracticable, and wholly unattainable in a government like ours, with such views of professional pride and ethics, as prevail, even with the most intelligent in other walks. Again, there has been a constant endeavor to force our ethical tenets upon the public, to insist upon those distinctions, which we understand well enough, but can never find favor, sympathy or support with the people or law-maker.

The fact is recognised by every member of this body, perhaps, that to secure interest and co-operation of the people in any measure, even for their own protection, all schools must unite, every sect be represented, in unbroken front. No ethical quibbles or therapeutic disputations must be allowed to distract the attentions, or confuse the purpose of appeal. Ethics being the pronounced relations which should exist among men, in community, may certainly be modified for the accomplishment of so

great a purpose. And, as to differences in therapeutic modes, they are as many, and as extreme among men we delight to honor as professional brothers, as may be stated by any sect. There is no law emanating from this or any other body, controling the physician as to character or quantity of any agent used for the cure of disease, time or mode of administration, views of pathology, treatment, and applied remedies. They are left, as they should be, to the enlightened conscience of each medical adviser.

I assume it, as self-evident, that the people should be supplied with such medical advisers, only, as are made competent to the great trust by proper education. Doctors are not born such, since the days of Paracelsus, but made by training and experience. Upon this ground, it is believed, every school of Medicine, so-called, the intelligent public, and the practitioners of regular, scientific medicine will unite. Now the practical question is, how shall this qualification be determined? The New Constitution, adopted by an overwhelming majority of our voting population, so becoming fundamental, organic law, in "Art. *General Provisions,* Sec. 31st, reads as follows: The Legislature may pass laws prescribing the qualifications of practitioners of medicine in this State, and to punish persons for malpractice; but no preference shall ever be given, by law, to any school of medicine."

I believe it beyond question, that practicing physicians, the rank and file, the true and tried custodians of public health and professional morals, are the only reliable arbiters in this matter. And the only way to secure this arbitration is to unite the whole profession, (as the people understand it) laying aside all ethical and therapeutic differences, and, as one man, petition, importune and wrestle, if need be, with our Legislatures, as did Israel of old, until they incorporate the County Societies, giving them power, of course, to determine the qualifications of their

members, after organization, and making a certificate of membership in one of said societies, the only legal evidence of qualification—and a penal offense to practice without such certificate of membership and good standing.

These suggestions have been already presented by your Committee on Legislation, (by addendum to report in Dallas and by direct report of same committee in Austin), but, as I believe, have not received the attention necessary to determine the voice and true verdict of the profession. Only by some such measures can the profession accomplish its constant wish, discharge a plain duty, determine who may practice medicine, regulate the sale of patent medicines, the compounding and dispensing drugs, secure wholesome legislation as to quarantine, police and public health, and strangle the hydra-headed monster, quackery, ere our borders are defiled. Only let us hold in abeyance our professional prejudices, until by sure process of eremacausis and purification, the profession of Texas may stand forth equal, if not superior, in *average attainment*, to any in this Union.

Shall we shrink from discharge of plain duty for fear of innovation upon established usage? Reformation, even revolution is necessary to progress in nature, in religion, in art, in politics and in the science of medicine. The flood and great upheavals of earth, revealing the riches and beauties of nature's hidden mysteries, give divine sanction to the declaration. The eloquence of inspired truth, as echoed through all time, by voices from torture, inquisition and martyrdom, proclaim it. The press, telegraph and steam whistle announce, in trumpet tones, the decadence of old ways, and usages revered.

This boasted government, its rapid growth, ready adaptation to community demands, gigantic proportions (the envy and admiration of a gazing world,) speaks of reformation, and sanctions the crimson steps of revolution, as the venerated light of

ancient dynasties pales into feeble shimmer under the brightness and glory of American freedom.

And what of Medical Science? To this enlightened audience the names of Harvey, Jenner, Hunter, Rush and Wells are suggestive, but the dauntless intrepidity of the great and eloquent Cullen, as he threw off the shackles of a dead language (a reproach upon his mother tongue, and barrier to dissemination of truth), making the Scottish capital eloquent of his praises, and moulding the opinions of the century, stand forth to chide temerity, and proclaim the necessity for reformation in medicine, if she will keep pace with the progressive demands of the age, and discharge the great duties that devolve upon her.

Shall we continue, year after year, century after century, to repeat the blunders and failures of our forefathers in medicine? Shall we be satisfied with the self-gratulation and adulation with which our meetings, too often, abound? Mutual admiration paroxysms, to be quashed and supplanted by the humiliating sense of ridiculous impotency, at the first glance of the outer world? Shall all effort, every attempt to correct the evils about us, the wholesale slaughter of our fellows, by ignorance, superstition, and knavery, every argument, honest expression of sympathy, or prayer reach but the walls of our own sanctum and be dissipated by the breath of this utilitarian age?

Shall we continue in voluntary blindness of the fact, that the interests of medicine are two-fold; those which belong to science, *per se*, to the cloister, student or sanctum of learning, and those which belong to practical medicine, in its relations to humanity; its application to life-saving, and healing the multitude? Will the conversion of this and its tributary voluntary associations into legally constituted bodies, let the elements be never so heterogeneous, change the social or professional status of a single individual? Are we not the same to each other? the same to all who value the man for what he is?

Occupy the highest standpoint of intelligent cultivation and philanthropy, outside the medical profession, and you see the necessity, and hear the universal demand for union and harmony, esential to strength and efficiency of action. The jarring discord of sects, which so distract our councils, may thus be arbitrated before a competent tribunal, and the voice of the profession given in the power of united wisdom. The experience, observation, attainments of all medicine concentrated in one unbroken torrent that will impress the nation by its success, its dignity, its power.

If to desire increase of usefulness, enlarged range of application for medical truth, be visionary, may such visions continue to cheer our way, and kindle the flame of expiring hope. If to apply the lessons of practical wisdom that surround us be heresy, away with orthodoxy. Let us point triumphantly to Washington, to Jefferson, to Luther and Calvin, to Cullen and our own Ephraim McDowell. Avaunt, ye spectres of the obsolete!—fossils of antiquated measures,—Mummery of Cant, Cane and Snuffbox. Our watchword should be *onward*, our challenge progress, our goal human safety and happiness. If these aims be treason, in the language of the immortal Henry, "then make the most of it."

These suggestions are made, believing the demand upon us, the time favorable, everything auspicious; and in the hope that fair and unprejudiced investigation may reveal to each one the best interests of this honorable body, of the profession at large, and of humanity.

I glory in the truth, so happily expressed by the "Richmond and Louisville Medical Journal," "The medical profession, in all cases affecting its character and safety, sits as a jury ready and able to decide each question for itself. It listens to the pleaders, but never allows them to forestall or declare the verdict." So mote it be.

I thank you, gentlemen, of this Association, for the distinguished honor you have conferred upon me—unsolicited and unexpected as it was —for the urbanity which has characterized your bearing —for the aid and council you have so generously extended to me as your presiding officer. I have tried, in return, to discharge the duties devolving upon me in such manner as would be most acceptable and profitable to you. I have not been able to satisfy my own wishes, perhaps not yours, but conscience sustains the declaration—I have done the best I could.

To you, ladies, the fairer and better portion of my audience, I would render sincere gratitude for your presence, and for your patient attention. I might, perhaps, with some show of propriety, make apology for detainiug you so long. My excuse, however, is in the fact, that while the aims of this organization are, in part, the good of the Medical Profession, they, for the most part, involve the good of humanity; and to whom could any appeal for suffering humanity be made, more appropriately, than to her who is first at the cradle to whisper love and comfort—constant by the bed of pain and anguish, and the last to pour into the dying ear lessons of hope, trust and consolation?

'Tis yours, ladies, to wield the magic scepter which bids, to life and exercise, all the better feelings of our nature, the holier instincts and charitable emotions of the heart, without which man becomes a brute and society a bedlam.

Man may boast his strength, courage, and intellectual power, which in compass and outreachings may approach infinitude, but as the morning sunbeams pierce the dark morass, gild its seething bosom and crown its pestiferous exhalations with a halo of heavenly light, only to intensify and quicken into life the poison of its deadly vapors; so education of the head, without *your* heart-culture, (the crowning glory of our better life), will yield us thorns instead of roses—thistles in lieu of figs.

*THE EUCALYPTUS GLOBULUS;

ITS HISTORY, CULTIVATION AND BOTANIC CHARACTER; EMBRACING ITS ORNAMENTAL AND ECONOMIC VALUE; ITS SANATIVE AND MEDICINAL PROPERTIES.

BY RICHARD BIBB, M. D., AUSTIN TEXAS.

"*Orandum est, ut sit mens sana in corpore sano.*"—*Juvenal, Sat.* 10, *V.* 331.

Eucalyptus Globulus—Labillardiere. Australian fever tree. Blue Gum of Australia and Tasmania—Natural order, Myrtacæ.

ITS HISTORY.

The Eucalyptus Globulus, (from the French of J. E. Planchon, published by the Department of Agriculture, Washington, 1875,) so named from the Greek "eu kaluptos," well covered, and Globulus, a button, from the fancied resemblance of its fruit to a covered coat button, is almost entirely indigenous to Australia and Tasmania. It was discovered by the French botanist Labillardiere, in the spring of 1792. For a long time (Pop. Science Monthly, July 1875, from Das, Ausland) it remained

*Prize Essay.

simply an object of idle curiosity; many botanic gardens possessing it, without any one knowing the fact.

In the year 1854, (Planchon, loc. cit.) it was introduced into Algeria; the island of Mauritus, (Das Ausland, loc. cit.) in 1858, and in Spain, (Planchon, loc. cit.) and France (Therapeutics, Mat. Med. and Toxicology, Wood) in 1860. Ramel, says Planchon (loc. cit.), though a novice in medicine, meeting with the Eucalyptus at Valencia, boldly declared, as early as 1863, that it would render the pestilential rice-fields around that city salubrious and compatible with health.

According to Planchon (loc. cit.) the first positive experiments upon its anti-febrile qualities were made in Spain by a Dr. Tristany, and subsequently published in an obscure publication, the Compilador Medico. These, with corroborating reports from the Mediterranean provinces of Spain, incited Dr. Brunel, a French physician of Montevideo, to subject the Eucalyptus to clinical investigation. His sudden death at Paris, in October, 1871, occurred before the results of his labors were announced. They were in a posthumous edition. Meanwhile, Gimbert, Carlotti, Miergues, Gubler and many others, had undertaken to investigate the reputed medical and *sanative properties of this tree.

The Eucalyptus Globulus (Planchon, loc. cit.; Das. Ausland, loc. cit.; Stearns, Proceedings Cal. Acad. Sciences, July, 1872) has been planted and raised with varying degrees of success, in the botanical gardens at the Monceaux, the Luxembourg, in the province of Nice, in Algeria and Corsica. The botanical gardens of Melbourne, it is said, contain this beautiful tree in great numbers. On the Cape of Good Hope, in the Argentine Republic, and on the island of Cuba, it is grown, and has been recently introduced, successfully, in the vicinity of Province, the Mauritine Alps and

*The author uses sanative in preference to the usual adjective sanitory, as being shorter, and, etymologically, more correct.

French Africa. At Rome, the Eucalyptus finds an abiding place admirably adapted to its growth, near "the malarial infested monastery, Tre Fontaine." Also, at Seville, Cordova, Valencia, Barcelona and the province of Cadiz.

Fort Vendres, Callioure, in western Pyrenees, Saint Maudrier, Hyeres, in the Var Cannes, Antibes and Villefranche are "stations where winter is the season in which exotic plants vegetate and bloom." In these favored localities, it is said, the Eucalypti flourish with a splendor equaled only by those in its own native habitat. In central France the prosperity of the tree is limited to regions where the orange trees bloom and vegetate in open air, without artificial means.

From the Botanical Gardens at Melbourne (Das. Ausland, loc. cit.) the Eucalyptus traversed the seas to America, and has been the object of experiment (Planchon, loc. cit.) in California, Louisiana, Florida and Texas. In California it has been cultivated and reared with success on a large scale, General Stratton alone possessing one hundred and thirty thousand of the young trees. Here it is said to grow with great rapidity, attaining an altitude of forty feet, with a diameter of one foot, in four years. The climate and soil of California (Stearns, loc. cit., Dr. Flint, Med. Times. April, 1874,) appears "to be nearly or quite as favorable" to the growth of this exotic, as to its native forest trees; and here it "grows quite up to the foot hills of the Sierras, where snow often" robes the earth in habiliments of spotless white.

At New Orleans the Eucalyptus trees were destroyed (Planchon, loc. cit.) by cold after reaching fifteen feet in height. It is much to be regretted, that so little information could be obtained from a locality apparently so well suited to its production. A number of letters were addressed to leading physicians of that State, soliciting such data as might be in their power to

contribute, with but little, if any success.

In the State of Florida, (Planchon, loc. cit.) the Eucalyptus thrives with great rapidity of growth; five feet in four months from seed is claimed for it, in some portions of the State, with reasonable expectation that it "will prove hardy, in a large" section of her territory.

In Texas, experiments have been instituted with the Eucalyptus at Galveston, Houston and Austin. Mr. Harrol, of Houston, writes, in a private letter to the Author: "I have been handling the Eucalyptus Globulus for about fifteen months, and during that time, have had them exposed to such cold weather as we have had, during the last two winters, and I am not sensible that one has ever been injured by cold or frost. I have made diligent inquiry, and have heard the subject much discussed, but as yet, have failed to hear of a single tree being killed by severe weather. A farmer on Clear Creek, in Galveston county, who has raised several hundred very fine specimens, and for whom we have sold many this winter, informs me he has never lost one by cold weather or frost. My own opinion is, whilst very young and tender, a severe "norther" and freeze would do them much violence, but after two years old, or even one, I should have but little apprehension for their safety in Texas, anywhere. We are selling a great many to the farmers on the Brazos, where they will be thoroughly tried. I have found them to grow best, in low, damp, sandy, or marshy soil. Mr. Bute, also of Houston, to a letter of inquiry, answers. "I purchased a plant of the Eucalyptus Globulus, about three inches high, last spring, and planted it on the north side of my garden in poor sandy soil, and directed it to be kept well watered. It began to grow from the first, and in six months from the time it was planted, had grown some ten or twelve feet high. It is now about one year old, fourteen feet high and doing well. I

have never protected it, except with a little bagging around the roots."

Dr. Fielding, of the same city, has been less successful. He says: "I planted two pounds of the seed a year ago last fall. One pound I got from Melbourne, Australia, the other from California. I succeeded in raising about half a million of the plants up to the storm last September, when all, but fifty, were destroyed. These I transplanted in open ground last October, and are all doing well. They are the plants raised from the seed obtained at Melbourne, which I consider hardier than those from California. I am satisfied the tree will flourish in Texas if the seed be gathered from trees in the north of Australia. From elsewhere, I have no faith. From the seed of the Melbourne tree, the plants are a foot high and vigorous, the others are from four to five, succulent and weed like, and had there been severe frost this winter, would have undoubtedly been killed. I tried, year before last, one pound of the seed from California trees, and planted them according to directions from that State, but lost them all that summer except a few, which were killed by frost the following winter."

Mr. Lenningson, a gentleman living near Austin, writes the Author: "In the spring, when the little plants were but six inches high, I planted them in the open ground; from that time forward, they grew rapidly, so much so, that by November following, they were seven feet or more high. The first of the winter of 1874, not being severe, the trees continued to thrive until January, 1875, when a cold spell set in that killed them, root and all."

Captain Scudder, of Galveston, as the Author is informed, has raised some fine specimens of the Eucalyptus, but, being unable to obtain, so far, an account of them from the Captain, he regrettingly passes on.

So far (Introduction to the French of J. E. Planchon, loc. cit.) as experience in the growth of this tree in this country will warrant an expression of opinion, it will be of no value as a tree in any section or locality where the thermometer at any time indicates ten degrees of frost. Young plants are invariably killed when the thermometer reaches down to 24 degrees. In climates where this degree of cold obtains only at rare intervals, the tree may survive after it has attained an uninterrupted growth for several years, even should the younger shoots and branches be destroyed."

"It is asserted, (Das. Ausland, loc. cit.) that the tree cannot endure the severity of * * * northern wniters, and that it can hardly thrive, save in a climate like that of its native habitat—Australia and Tasmania. In support of this view we have the observations of many gardeners in the British Isles, who assert that the tree "cannot resist severe frosts, and consequently does not last many years." "I have frequently seen," writes one, "young trees, ten, twenty, and even thirty feet high, in the Channel Islands, growing vigorously, during a period of three, four or more years, in sheltered situations, but on appearance of severe frost, killed to the ground." On the other hand, various correspondents of the Gardeners' Chronicle write, that during the severe cold of last winter, the Eucalyptus was uninjured in the Islands of Anglesea, and in the west and south of Ireland."

The violent storms (Planchon, loc. cit.) to which the Island of Mauritus is exposed, destroys the Eucalyptus. Thus, in the Botanic Gardens of Pampelmousses, perished all the trees in 1868, that had been planted there, ten years before.

ITS CULTIVATION.

"The most satisfactory method (Introduction, loc. cit.) of raising young plants is to sow the seeds in light sandy soil, cover-

ing them with a slight sprinkling of sand, and pressing the surface by beating it with a spade or flat trowel; this will put the seed sufficiently deep. A frame, such as is used for forwarding tender vegetable plants, and which can be covered with a glazed sash, will be found most economical. The soil should be kept moderately damp and the glass shaded for a week or two until the young plants appear. When they have attained a height of three or four inches, it will be necessary to thin them out, so that those remaining will be at least two inches a part. * * *

Those that are removed by this operation may be transplanted, like young cabbage or tobacco plants, in a frame similar to that in which they were raised." They should be placed the same distance apart, and "if watered, and shaded from bright sun for a week, they will commence to grow." After having been thus treated and left in this position for twelve months, "they will be quite large enough for removal and planting in their permanent sites."

Dr. Logan (Third Biennial Report of the State Board of Health of California, for 1874 and '75) gives the following directions for raising and planting out young slips as promising largest measure of success. "Plant," says he, "your seed immediately, in a box twelve inches deep, containing eight inches of clean, rich loam, by dropping the seeds on the surface, about an inch apart, and cover them with a quarter of an inch of saw-dust, or by sifting vegetable mold over them a like depth. The common method of placing the seed in three or four inches depth of soil, is objectionable, as the roots soon penetrate to the bottom of the box, and are bent off at right angles to the axis of the plant. This distortion (see also, Stearns, loc. cit.) prevents the tree from having such a firm hold in the soil, as it otherwise would. Hence, so many of the Eucalypt trees blow over after having a growth of four or five years. Their germination may

be facilitated by soaking them for twenty-four hours in a pint of warm water, in which a piece of saltpetre or carbonate of ammonia about the size of a marble, has been dissolved. Place the box in your kitchen, or some other warm locality where the sunlight will reach it, cover it with glass or a piece of board, and keep the soil watered every day, sufficiently to give a decidedly moist character thereto; if possible, keep up a temperature of about seventy-five degrees Fahrenheit, during the day-time until the seed sprout. When they are half an inch high, remove the covering, and give them sunshine. They will grow more slowly, but the plants will be more hardy and vigorous. When they are four inches high, they should be gradually seasoned to out-door temperature, so that they may be ready to transplant as soon as frost disappears. You will then have trees from four to six inches high, growing in a depth of soil which will insure straight and vigorous roots.

Subsoil a strip twenty-six feet wide, * * * through "this open four furrows, six feet a part, and run the plow through each several times till the soil is loosened deep and finely pulverized." Then dibble the plants in holes along the centre of the furrows, four feet apart, six inches deep, and one and a half in diameter. Carefully detach, with a knife or trowel, each slip from the soil in which it has been reared, so as to disturb it as little as possible around the roots, and insert them "into a hole of its natural depth, being careful to" press the dirt around the root, and level the surface round about it. "In short, plant them just as you would cabbage or tomato plants; but make this point, be *sure* the roots are vertical." If they are not, they should be well trimmed before planting them.

If they are planted, as directed, around a piece of ground ten acres square, there will be four rows of trees "four feet apart in the row, and the rows six feet apart; each row will contain two

thousand and eighty-six trees," aggregating "eight thousand three hundred and forty-four trees, occupying five acres of land. They "require no stakes," and "must be dressed with the cultivator three times during the first year," and ploughed and dressed three times yearly, for four succeeding years.

"For forest culture," Mr. Stearnes (loc. cit.) "considers the smaller plants, six inches, or thereabout, indispensable for success." He, and Dr. Logan as well, deprecates trimming the lower branches, where there is sufficient space for the trees to grow in. Condemning it, not only on account of the violence done to the immediate health of the tree, and its subsequent premature decay; but because it robs the victim of "its normal physiognomy and distinctive character by carving it into grotesque and inappropriate shapes," which, if let alone, as is asserted by Christian Hoffman, (New Remedies, July, 1873) often attains an altitude of "one hundred and twenty feet without a lateral branch."

It requires (Planchon, loc. cit.; Hoffman, loc. cit.) low, warm, marshy soil for its perfect and rapid growth; but in its natural forest, (Ibid) and California (Dr. Logan, loc. cit.) it is thrifty on the hill-sides and "in dry, poor soils." Planchon (loc. cit.) inclines to the opinion, that with proper care, it could be made to wood the barren plains and mountains of Algeria. "The Eucalyptus," says he, "successfully resists summer dryness, and profits by the rains of autumn, winter and spring, wherever the mildness of the climate permits it to vegetate without interruption."

In a paper to the London Medical Times and Gazette, Mr. Standford (Dr. Flint, loc. cit.) of Pixhouse, Tinsburg, England, who has raised some fine samples of the Eucalyptus, says he forced the plants in a hot house. In one year after setting them out, they were four feet, and by the fifth were growing rapidly in a sheltered position, in a park, and were thirty feet

high. He recommends that the plants, while young and tender, be placed under shelter every winter, for the first three years, and for the fourth and fifth, to be well protected by wisps of straw and hay, for several feet up. In doors, he advises that they be kept in an orangery or high green house, with plenty of light and little water.

Although the Eucalyptus is described as being a very tender tree, having its young shoots injured by a few degrees of frost, Dr. Flint (loc. cit.) concludes from the fact, that the lowest temperature in eighteen of the principal cities in England for two years, was 16° at Sheffield, the Eucalyptus would vegetate with but little care east of the Appalachian range, in latitude thirty-three; where Magnolias are native, and further south. In California, he says, "they grow quite up to the foot-hills" of the mountains where snow is not unfrequently mixed with its leaves. Planchon (loc. cit.) claims it will flourish, and may be cultivated with unparalleled rapidity of growth, in climates suited to the production of oranges.

ITS BOTANICAL CHARACTER.

The Eucalyptus Globulus, (Introduction, loc. cit.) one of the largest and tallest trees known to mankind, is an evergreen, of extremely rapid and succulent growth; often attaining, it is said, in Australia and Tasmania altitudes of three and four hundred feet. Wherever human industry has seen fit to make this exotic giant the subject of attention, it has maintained in a remarkable degree, this noted feature. Thus, Mr. Stearns (loc. cit.) says, on high ground, in a dry and unfavorable year, (1871) he noticed an instance where it grew a trifle over nine feet in height, and one and a quarter inches in diameter in eleven months. At Houston and Austin, in this State, accounts equally favorable have been gathered. Planchon (loc. cit.) says a plank from this tree was sent to the London

Exhibition in 1862, "measuring seventy-five feet in length, ten in width, with proportionate thickness. Australia desired to send one, one hundred and sixty feet long, but abandoned the idea, as no ship could be found long enough to transport it."

The wood of the Eucalyptus (Planchon, loc. cit.) is tenaceous, compact and durable, and contains a resinous principle that protects it from decay and the ravages of insects. It is heavier, and not so elastic as the pine, but susceptible of finer polish, and is more enduring, when exposed.

In early life, the leaves of the Eucalyptus (Planchon, loc. cit.) are apposed, sessile, and glaucous; resembling, somewhat, the myrtle and Saint John's wort. As the tree advances in age, its whole aspect changes. The branches instead of being apposed, alternate, as do the leaves, the latter dropping the ovoid form and glaucous color, assume an elongated, scythe-like shape and pea-green hue. Losing their sessility, they "are balanced to the play of the wind on slender stalks." The myrtle-like appearance is supplanted by that of the willow, with "slender, clear, pale and weeping foliation;" and "branches dry and tough in texture, abundantly shifting the light," it becomes "melancholy in the main, where brilliancy of color is wanting." Whilst the leaves of young trees are broad, long, and fixed in a horizontal posture, those of the full grown are (New Remedies, July, 1873) narrow, one inch wide, from four to seven inches long, and are placed in the vertical position, thus offering the edge in place of the surface to the sun. They are glossy on both sides, and, like the trunk and branches, are faintly blueish.

This polymorphism (Das Ausland, loc. cit.) is not characteristic of all the species of the Eucalypti. In the Eucalyptus Cordata, it is said to be entirely wanting.

The youthful Eucalyptus is neither florescent nor fruitful, but with maturition, both appear (Planchon, loc. cit.) high up near the top of the tree. "The flowers are solitary, and grow only out of the axils of the leaves," and are of a purple hue. "The calyx tube is turbinate or campanulate, sepals united in a calyptra or cover, which separates in flowering by a fissure at the base, carrying the petals with it; stamens indefinite, free, with thread-like filaments; anthers versatile; opening longitudinally; ovary $\frac{3}{4}$ celled; style filiform, stigma small." (American Cyclopædia, vol. vi.)

"The form" of the fruit (Planchon, loc. cit.) "is that of a reversed cone, raising four prominent sides, slightly widened at the edge, and hollowed in the centre by four cells, which open by large radiating shoulders, separated by as many triangular tongues. Before flowering, this inferior part of the calyx, which becomes the fruit, bears a thick, wrinkled, conoidic cap, which some botanists believe to be the superior part of the calyx; others a corolla with consolidated petals. It is from this covering that the plant receives its name Eucalyptus."

ITS ORNAMENTAL VALUE.

For beautifying drives, parks and lawns, the tall, graceful and sightly appearance of the Eucalyptus, as well as its exotic origin and rapidity of growth, justly constitute it a great favorite for these purposes, wherever it has been introduced. Thus it is said, (Das Ausland, loc. cit.) after its permanent introduction into Algeria by Ramel, in 1861, "a genuine Eucalyptus furor broke out; every one desired to own this beautiful tree, and they were planted" there "by the thousand." In alluding to its popularity as an ornamental tree in California, where a variety of Australian forest trees are to be found in large numbers, especially in the vicinity and city of San Francisco, its neighbor Oakland, and adjacent towns, Stearns (loc. cit.) says: "The most popular

of these belong to the genera Acacia and Eucalyptus," which, "with rapidity of growth," combined "with gracefulness, beauty and color, present so many advantages as to fairly entitle them to popular esteem."

In some portions of California, objections (Stearns, loc. cit.; Dr. Logan, loc. cit.)—mention of which has been made before—have been urged that these trees, when planted in open ground, and unprotected from the ravages of winds, are blown down. At this, Stearns is not surprised, but expresses admiration that so few are thus destroyed. The fault, he contends, does not lie in the inability of the trees to resist the force of the wind; but rather to the method of raising, and selecting plants for permanent planting. Those requiring only a few purchase plants that are from four to six feet high, since they are sold cheaper and make a greater immediate show, that were raised in boxes or pots, after having attained a height of six inches. As "will be readily perceived," he continues, "the tap root which in a natural state descends" as the tree advances in growth, will be "diverted from a perpendicular into a rotary direction, analogous to a spiral spring" as it is forced in contact with the hard and impermeable substance at the bottom of the vessels. Likewise with its lateral branches, when impinged against the sides of the nourishers, are folded back to cross and recross each other into a mat-like mass under, instead of running out from and anchoring the tree securely in the earth.

As a shade tree only, the Eucalyptus will hardly attain much celebrity. Its enormous height, together with the vertical position of its foliage, renders it easily permeable by the sun and rain fall. For this reason, it is said (Planchon, loc. cit.) "there is but little shade or shelter in an Australian forest."

ITS ECONOMIC VALUE.

Among the more recent advocates of the value of the Euca-

lyptus over other forest trees from an economic stand point, Planchon, (loc. cit.) Stearns, (loc. cit.) Christian Hoffman, (loc. cit.) and Dr. Logan, (loc. cit.) may be mentioned. Its rapid growth, and enormous size, in connection with durability, compactness and tenacity of its wood, are the chief reasons assigned why it should commend itself to the attention of economists. Planchon (loc. cit.) states, that the wood of the Eucalyptus, owing to the presence of a resinous material, possesses a sort of incorruptibility which allows it to remain a long time in contact with salt water" without detrition. For this reason, he says, the English navy holds it in high repute for ship building, and out of which, are constructed the keels of the best and finest whale ships that furrow the South American seas. Planchon also affirms that it is as durable under-ground as the oak, which, when remembered with the facility of its reproduction, and the increasing demand for such commodities of trade, makes it preferable for railroad ties, telegraph poles, bridge sills and such like. By virtue of its "incorruptibility" when exposed to the action of sea water, Planchon deems it infinitely superior to all other wood, for pier and viaduct building, and to be inferior only to the Canadian white oak for piling purposes.

Ferd Von Muller (The Principal Timber Trees, etc. etc.,) says: "This tree is of extremely rapid growth and attains a height of four hundred feet, furnishing a first-class wood; shipbuilders get keels of this timber one hundred and twenty feet long; besides this they use it extensively for planking and many other parts of the ship, and it is considered to be generally superior to the American Rock Elm. A test of strength has been made between some Blue Gum, English oak and Indian teak. The Blue Gum carried 14 lbs. weight more than the oak, and 17 lbs. 4 ozs. more than teak, upon the square inch."

As approximating more closely a demonstration of the eco-

nomic value of the Eucalyptus, than any other writing with which the Author is acquainted, he bespeaks a careful consideration for the subjoined rescript from the valuable paper of Dr. Logan before cited; premising that the calculations are based upon the supposition, that around a field ten acres square, there are four rows of trees, four feet apart, with six feet of space between each row. In all, covering an area of five acres.

"The following table will give the dimensions of the trees at five years old, and at every succeeding year, till they are thirteen years old:

AGE—YEARS.	DIAMETER—INCHES.	HEIGHT—FEET.	WOOD—IN CUBIC FEET.
5	9	40	5.75
6	10	45	8
7	11	50	11.5
8	12	55	14.33
9	13	60	18.40
10	14	65	23
11	15	70	28
12	16	75	34.75
13	17	80	42.

"On the sixth year, take out every other tree of the first row; seventh year, second row; eighth year, third row; ninth year, fourth row. The amount of cord wood obtained each year will be forty-seven, fifty-seven, ninety-three, and one hundred and sixteen, making a total of three hundred and twenty-three cords. You will now have left four thousand one hundred and seventy-two trees, and the trees will be eight feet apart in each row. On the tenth, eleventh, twelfth and thirteenth year take out every other tree, and the amount of cord wood obtained will be seventy-five, ninety-three, one hundred and fourteen, and one hundred and twenty-two cords. Making an aggregate of seven hundred and forty-five cords of wood obtained, and a balance of two thousand and eighty-six trees, which will contain six hundred and eighty-four cords. Now, sum up the whole operation. Total quantity of wood realized at the end of thirteen years, one

thousand four hundred and twenty-nine cords at a cost of:

Seed	$ 5 00
Preparing five acres of ground	15 00
Six days labor planting	12 00
Subsequent cultivation	60 00
Total cost	$92 00

"These estimates are within bounds. On dry hillsides, the growth will not be so rapid, and if fifty per. cent. be taken from the foregoing results, there will still be left a wide margin for profit. On the other hand, on larger farms, a much greater number of trees may be thus cultivated. The outside capacity of one hundred and sixty acres, will be fourteen thousand trees, yielding at the end of thirteen years, two thousand four hundred cords of wood. Any other kind of forest trees will prove remunerative if cultivated, but on account of the rapid growth of the Eucalyptus and the density and durability of its wood, it commends itself, over other kinds for immediate profit."

In addition to the foregoing, Christian Hoffman (loc. cit.) has demonstrated that the bark of the Eucalyptus Globulus is "well adapted for the manufacture of packing paper, mill and paste board," and probably for writing paper also.

The Abbe Rolland communicated to the "Cultivateur de la Region Lyonnaise" (New Remedies, Jan., 1874,) "an infallible remedy" against the phylloxera, which, after two years trial, he recommends "with confidence" to vine growers. The remedy consists in inoculating the vine with essence of the Eucalyptus, by means of a broad incision through the bark, at the neck of the vine, into which is inserted a few drops of the essence on a camel's hair brush. The insects generally disappear by the third day after the application. Through any other portion of the bark the inoculation might be made successfully, but was more speedy when near the roots. These observations are confirmed by a

writer in the Temps (Med. News and Library, Aug., 1875,) who asserts that other insects, as well as phylloxera, disappear, even from vines growing near the Eucalyptus. These results were noticed in several vineyards to be uniform.

Dr. Stout (Ringer, London Med. Record) is of the opinion that the dried leaves, if used with clothing packed away, would be as effectual in destroying and driving away moth and other insects that prey thereon, as camphor or tobacco, and less disagreeable.

ITS SANATIVE PROPERTIES.

The first, and, perhaps by far the most important and influential property of the Eucalyptus Globulus, and that which has brought it more especially into notice, is contained in its reputed power for rendering inert the miasmatic agency supposed to be the cause of fevers in low, wet and marshy districts. Hence, the name of the "fever destroying tree." "It is in this respect (Dr. Logan, loc. cit., from a lecture of Prof. Bentley, etc.,) commonly regarded as being serviceable in two ways: First, by the far spreading roots of this gigantic tree acting like a sponge, as it were, and thus pumping up water and draining the ground; and, secondly, by emitting odorous antiseptic emanations from its leaves." The modus operandi, as given above, is accepted by Gubler (Bull. Gen. de Therapie, 1874) and Vulpus [Archiv. der Pharmacie, Nov., 1874,] who believe this "antiseptic emanation" to be vaporized Eucalyptol thrown out by action of the leaves. Gubler, however, had not pushed his experiments far enough to determine this latter point beyond question.

Mr. J. Bosisto, Pres. Pharmaceutical Society of Victoria, [Med. and Surg. Reporter, Jan., 1875,] believes that the sanative influence of this tree is caused, first, physically, by powerful root action in absorbing humidity from the earth; by its being evergreen, and in continuous action; by abundance of leaf surface;

by its evaporation of water, oil and acid, under a perpetually genial atmosphere; and, chemically, by the power of its volatile oil and volatile acid, abundantly present in the plant and air, to produce peroxide of hydrogen."

According to Gimbert [Dr. Flint, loc. cit.] the Eucalyptus absorbs ten times its weight in water from the soil every twenty-four hours, and destroys malarial influences in conjunction with this, by emitting a camphorous effluvia.

Such evidence as could be obtained by a somewhat extended research of modern literature, tending to substantiate the reputed "fever-destroying" properties of the Eucalyptus, is embodied in the subjoined extracts.

"In point of fact, [Das Ausland, loc. cit.] those regions where this beautiful tree is indigenous, and where it grows into forests, enjoy a very healthy climate. But, further, we have evidence that the planting of the Eucalyptus in marshy localities counteracts paludal fever. This has been shown by experience at the Cape, in the provinces of Cadiz, Seville, Cordova, Valencia and Barcelona; in Corsica and Algeria. At Pardock, distant a few miles from the city of Algiers, there was a farm on the banks of the Hamyse which was noted for its fevers, so that people died there 'like flies,' so deadly was the atmosphere. In the spring of the year 1867, 1300 Eucalyptus trees were planted there, and in July of the same year—the month in which the fever is wont to be most virulent—there was not a single case of disease there, although the trees were then only nine feet in height; and the place has been free from fever ever since. In the vicinity of Constantine, the farm, Ben Machydillin, was in like bad repute; all around it were swamps that never were dry, not even in the hottest summers. Still, in five years, this great morass was completely dried by the planting of 14,000 Eucalyptus trees, and the health of the inhabitants has

ever since been excellent. Lo Gue, near Constantine, once a place infested by fever, is now salubrious and free from fever, having been surrounded with a plantation of the Eucalyptus. The Abbe Felix Charmetau states that, at Maison Canee, near Harrasch, the Eucalyptus plantations have rendered the use of quinine unnecessary."

It is stated upon authority of Capt. Ney (Med. News and Library, Aug., 1875) that at the village of Ain Mokra, it was absolutely necessary to change the French garrison every five days, so intense was the malarial poison. After planting the Eucalyptus on the lake shores and railroads, the fever almost entirely disappeared; and the station has since been the healthiest of any locality in that entire section of country. Dr. Cosson (Med. News and Library, Aug., 1875) makes known that climatic changes, equally salutary in character, have been observed in the scope of country immediately bordering on lake Fezzara. Since the shores of that inland sea have been planted with the Eucalyptus, the malaria, which was formerly abundantly present and violent in its action, has become scarce, and comparatively harmless. Ramel (Dr. Logan, loc. cit.) notices localities where the tree abounds in Australia to be healthy and free from miasmatic fevers, and sickly in parts where it is not found.

Gimbert (Comp. rend. de l' acad. 77, Nov. 14, 1873) affirms that he, Trattier, Rouverel, Watel and Sanliere, have witnessed the sanatory influences of the Eucalyptus in miasmatic infected regions. He (Gimbert) observed this, when the trees were not higher than three meters.

"In the Island of Cuba" (New Remedies, Apl., 1874; Dr. Logan, loc. cit.) "ague and all other paludean diseases are fast disappearing from the unhealthy districts where this tree has been introduced. A station-house at one end of the railway viaduct, in the department of Var"—Southern France—"was so

pestilential that the officials could not be kept there longer than a year; forty of these trees were planted, and it is now as healthy as any other place on the line." From Mexico, (Das Ausland, loc. cit.) comes testimony corroborating the efficacy of the Eucalyptus when planted in low, wet and marshy sections, for preventing telluric and paludal diseases.

Nearer home, in Kern county, California, climatic changes have been obtained by planting the Eucalyptus, that should challenge earnest consideration from those living in insalubrious and miasmatic districts in this country. These observations, made by the editor of the Kern County Courier, are reported by the late lamented Dr. Logan (loc. cit.) as follows:

"We speak somewhat positively in regard to the sanative or anti-malarial influences of the Eucalyptus. If all, or even part of the evidence we have read on the subject, coming from sources entitled to the utmost confidence, is true, we are certainly justified in so doing. But we are not accustomed to speak positively, or say in effect we know, unless we have the evidence of our observation or personal experience. In regrad to the anti-malarial influence of the Eucalyptus, we have this conclusive evidence. We have given it what we regard as a reasonably fair test on our own farm. This is cultivated by two families or companies of Chinese. One company lives on the north and the other on the south end of the premises, about three-fourths of a mile apart. The localities both parties inhabit are favorable to the development of malaria. The soil is rich, moist and teeming with vegetable life, and the free sweep of the prevailing wind is obstructed by the intervention of dense thickets. As might be expected, they have, every year during the heated term, suffered with malarial fever. Last winter we determined to test the much vaunted virtues of the Eucalyptus. In February we gave to the party at the north end two ounces of the seed, with directions that

they should be planted near the house. They germinated finely, and produced several thousand of the young plants, but the frost killed most of them. About twelve hundred, however, survived. These, when the heated term commenced, had attained an average height of two feet, and emitted a strong aromatic or camphorous odor, perceptible at a distance of a hundred yards. In due time the party at the south end were visited by their usual mildly-distressing fever, but up to the present time we have looked in vain for the first symptoms to develop in the other. They are all, to their own astonishment, in the most robust health. These trees now average more than three feet in height, and the atmosphere of the houses is strongly inpregnated with their odor. We have investigated in vain for other causes to which to attribute the anomalous state of health of the inmates, and can find none but the reputed sanative properties of this tree. We have finally become convinced from the evidence of our own senses, that it will do all the current accounts given of it allege, and propose, the coming season, to plant it on all the waste places and corners of our farm we can spare from other purposes. If everybody would do likewise the great valley of Kern county might soon take rank among the Sanitariums of the State, because as yet no disease, except a mild type of malarial fever, has shown itself. Every land owner, be his possessions large or small, should put it in the light of a duty to plant more or less of the Eucalyptus."

ITS MEDICINAL PROPERTIES.

In March, 1870, the announcement was made by M. Cloez, (Dr. Ringer, London Med. Record) whose researches were subsequently confirmed by M. Debray (De l' Eucalyptus Globulus, Paris, 1872) and M. Rabuteau (communication a l' Academie des Sciences, Nov., 1872,) that the Eucalyptus Globulus contained chlorophyl, cellulose, an essential oil (Eucalyptol) resin, tannin, lime, and alkaline salts. These investigators conclude

that the active principle of the plant, which according to Rabuteau (Compt. Rend., 1875) does not contain an alkaloid, although the leaves yield a resinous substance, that enters readily into compounds with other alkaloids, is resident in Eucalyptol; maobile, nearly colorless, camphoraceous liquid, composed of $C_{24} H_{20} O_2$. Gimbert (Archiv. Gen. de Med. Feb. 1873) and Bucher (Bayr. Aerzt. Intellegenzb., 24, 1870) corroborate these statements also; while, on the other hand, Gubler (Bull. Gen. de Therapie, 1871) denies that Eucalyptol possesses the active properties of the Eucalyptus.

The entire tree (Dr. Logan, loc. cit.) is permeated with the essential oil, but it is most abundant in the leaves and flowers, which yield by distillation about four per. cent." The oil may be readily seen, stored up in little pellucid glands, when the leaves are held up before a light, "by the semi-transparent appearance they then exhibit." "It is freely soluble (Wood, loc. cit.) in ether, alcohol and the fatty oils, and is obtained by distillation or by acting on the leaves with ether. It does not undergo oxidation into a resinous mass on exposure to the air, and is remarkable for its power of resisting the influence of concentrated sulphuric acid."

Homeyer and Faust, (New Remedies, April, 1875,) who have made an analysis of Eucalyptol, announce that it contains, "1. A peculiar terpine boiling at 150° to 151°. 2. Another terpine boiling at 172° to 175°. 3. Cymol. 4. An oxygenated body closely resembling cymol. The terpine under 2 and the cymol constitute 9-10 of the Eucalyptus oil. The proportion of terpine to cymol is as 2 to 1. The oxygenated hydrocarbon boils at 216° to 218° and its formula is $C_{10} H_{14} O$, or $C_{10} H_{16} O$."

Martain's researches (Bull. Gen. de Therapie, 1871,) discloses the fact, that trees raised in Australia and Algeria contain the

essential oil, in greater abundance, and superiority of quality, than those grown in Southern France and Corsica.

PHYSIOLOGICAL ACTION.

Eucalyptol, when applied (Ringer, loc. cit.; Wood, loc. cit.) to the mucous membranes, induces congestion in proportion to the strength of the application; one or two drops causing a sensation of coldness, while one or two grammes begets a disagreeable warmth in the mouth and fauces, with burning and pain in the stomach and intestines. Small doses promote, large ones destroy the appetite. Ten to twenty drops accelerate the pulse, and produce a state of pleasant, general excitement, buoyancy of spirits, with increase of appetite, strength, and sexual desire. In some cases, it causes intoxication, but, unlike that of opium or alcohol, is not followed by brutishness or torpor; a calm and soothing sleep succeeds it. Gubler and Gimbert believe the excitement may run into fever, the latter having observed that phenomena in a dog, after subcutaneous injection of the oil.

According to Gubler (loc. cit.) the aqueous extract in half drachm doses, increased the appetite, while the alcoholic and ethereal, in same quantities, caused agitations and excitement. Eucalyptol increased the flow of saliva, the force and frequency of circulation and respiration. To the urine, it imparted the odor of violets. If vaporized and inhaled in a close room, he believes it might produce asphyxia; and, according to Sicard, when inhaled directly, induced migraine. Large doses of the leaves, he opines, would be tolerated much better than the oil.

On healthy persons, Sietz (Bayr. Aerzt. Intellegenzb.,24, 1870] observed the Alcoholic tincture to cause, from its administration in half drachm doses, increased action of the salivary glands, the heart and respiration, and increase of temperature; with sensations of warmth and fullness of the head, continuing for some hours after its ingestion. The augmented salivary secretion, he ob-

served, was succeeded by dryness of the mouth and fauces. He noted, after using, hypodermically, an infusion of one to five on rabbits, a very remarkable increase of the heart's action, and a rise of temperature from one to one and a half degrees, which was succeeded by depression with agitations of several hours duration.

Gimbert's researches (Archiv. Gen. de Med., 1873,) are, in the main, confirmatory of Gubler's. In addition thereto, he reports after exhibition of the oil, with some persons, feverishness, migraine and palpitations of the heart. Where small doses of Eucalyptol were long continued, he observed general depression, with decrease of arterial pressure and animal heat. Large doses lowered the temperature from one to one and a half degrees, provoked deeper and more frequent respiratory effort, reduced the pulse rate, induced asthenia, diminished reflex action, and engendered a strong desire for sleep, without stupor or dilatation of the pupils, except this latter condition, which occurred only in old and enfeebled persons, and subsided readily to the action of strong coffee. He found large doses to act toxically with animals, the usual symptoms being suspension of the excito-motor functions of the cord, continual fall of temperature leading on to paralysis and death, sometimes after short convulsions.

Gimbert (Ibid) believes that Eucalyptol is eliminated chiefly through the lungs. "Even in animals," says he, "the breath smells of it after an anal injection." In its passage through the lungs, he opines, if its use be long continued, it may irritate the mucous coat by contracting the capillaries and lessening pulmonic and tracheal secretions. In this manner it may aggravate the tendency to cough, and consequently increase the liability to hemorrhage with those suffering from consumption and other pectoral diseases. Administration of the powdered leaves, he found, did not impart to the urine the violet odor, but augmented the flow

of that fluid, to which it gave a bright red, while the oil, a light yellow, color. Both preparations added greatly to the amount of urea excreted. Upon the skin, Eucalyptol acted as a diaphoretic, and impregnated the sweat with its characteristic scent. In some cases, erythema and febrile symptoms followed its ingestion; in others, cholic and green dejections, whilst a few, to whom he gave it, suffering with hemorrhoids, the affection entirely disappeared. This last result, Dr. Ringer (loc. cit.), thinks is due mainly to its action on the pelvic sympathetic. The disagreeable cerebral symptoms and palpitations were witnessed in persons of the nervous diathesis, whom he observed were effected much easier with the oil, than those of alymphatic temperament.

Gimbert regards the action of Eucalyptol to be almost analogous to that of the Bromide of potassium. The decline of temperature following its administration, he deems important as a guide in its employment, since in poisonous doses it occurs with great rapidity. Hence, he advises thermometrical observations when it is desired to produce sedation, by which means dangerous symptoms may be anticipated and successfully averted. For this purpose he commends potations of strong coffee.

Gimbert also declares Eucalyptol to be an excellent antiseptic; and which, if injected into the blood, prevents prutrefaction of that fluid. Besides this, he claims that its presence is an effectual barrier to the formation of rubigo and vibrio. Binz (Rept. der Pharmacie, 1873,) confirms these positions, and states that it preserves meats and albuminous compounds as well as quinine, and precludes with equal certainty the production of fermentation and bacteria in the blood. The blood of animals containing Eucalyptol, Gimbert says, presents a rose red color; the corpuscles, though enlarged, continue globular. After twenty-four hours, he observes, it becomes discolored; the haemaglobulin mixes with the serum, and it turns a dark brown.

Dr. Ringer (loc. cit.) sums up Gimbert's conclusions as follows: "It is an antiseptic, by preventing decomposition of organic substances, and especially the blood. It is a powerful general stimulant, by its primary action on the nervous system, and thereby quickening the capillary circulation. Through its influence on the nervous system, it is an antispasmodic. By diminishing the excito-motor activity of the cord, by lessening animal combustion, the frequency of respiration and circulation, it becomes a febrifuge and sedative."

Binz (loc. cit.) concludes from experiments made on frogs, that Eucalyptol diminishes reflex excitability and animal heat. Shlaeger (Diss. Gottingen, 1874) and Maesler (Deutches Archiv. furr Klin. Med.) found its administration, by the sub-cutaneous method, to produce contraction of the spleen in animals. Mees (Archiv. furr Klin. Med., 1874) observed that a solution containing two per cent. of the oil, prevented fermentation and formation of bacterian blood. A mixture, in which there was one fifteenth per cent. of Eucalyptol, destroyed, in fifteen minutes, and one of one tenth, immediately, according to Mees, the contractility of the white blood corpuscles. Vaporized and inhaled, it arrested osmosis of the white globules in the venous circulation. In animals to whom he gave, hypodermically, a fluid containing bacteria, and at the same time an injection of Eucalyptol, the temperature rose as high as without it.

THERAPEUTICS.

The various preparations of the Eucalyptus Globulus have been used chiefly in diseases requiring an anti-periodic, both in this and foreign countries. For this purpose, Dr. Keller, physician in chief of the Austrian railway company, has employed it more extensively, doubtless, than any one else. The results of his observations are contained in the following excerpt from the Half-Yearly Abstract, July, 1872:

"The number of patients treated with tincture of Eucalyptus was 432. Of these, 310 (71.76 per cent.) were perfectly cured, and 122 (28.24) required to be afterwards treated with quinine. Of the 310 patients who were cured, no paroxysm occurred after the first dose in 202; in the remaining 108, there were one or more subsequent paroxysms, which, however, yielded to repeated doses of the medicine. Quinine had been given without result in 118 of the 432 cases; 293 of the patients had had ague in previous years, and 139 were attacked for the first time in 1871. Of the 122 cases in which the Eucalyptus failed, 58 recovered under the use of quinine, 38 were not cured, 10 were sent home and 16 remained under treatment. Of the 118 cases in which quinine had been given unsuccessfully, 91 recovered under the use of Eucalyptus, and in 27 no result followed.

"The several types of intermittent fever were represented as follows; Quotidian, complicated, 117, simple 73=190; tertian, complicated, 126, simple 95=221; quartan, complicated, 16, simple 4=20; quintan, complicated, 1. The complications were enlargements of the spleen or liver, anemia or chronic gastric catarrh, paludal cachexia, etc. The remedy was successful in 161 of the 260 complicated cases, or 61.9 per cent.; and in 149, or 86.6 per cent., of the simple cases. The percentages of success in the several types were, in tertian, 75.57; in quartan, 70; in quotidian, 67.89. Among the cases in which the first dose of Eucalyptus arrested the disease, were 95 complicated and 107 simple; 28 of the former and 20 of the latter had been previously treated unsuccessfully with quinine. In the cases where the paroxysms recurred, there were 70 complicated and 38 simple; quinine had been given without success in 27 of the former and in 15 of the latter.

"Of the 432 patients, 353 were men, 46 women and 33 children. There were 155 patients who were immigrants into the

localities; in these the disease was more frequently attended with complications, and the treatment was less successful than among the indigenous inhabitants.

"The treatment was generally commenced on the fifth day after the first paroxysm of ague; the duration averaged nine and a half days, that with quinine in previous years having been twelve and a half days.

"The tincture was made by dividing into small pieces the leaves of Eucalyptus, obtained through France from the native country of the plant, and macerating in alcohol for three months. Ten pounds of the leaves yielded twenty-five quarts of the tincture. The average dose was two drachms; and the average quantity used for each patient was seven drachms—this, however, varied much, according to the nature of the case and its complications."

Keller concludes "that the remedy is of service especially in obstinate cases of ague where quinine has been given unsuccessfully." In this, he is supported by Lorinser (L' Union Pharmaceutique, Sept., 1872), Castan (Montpellier Med.) and Dr. Talbot (R. and L. Journal, Jany., 1875). Castan claims fifteen cures, by the Eucalyptus treatment, out of twenty-seven cases, in whom he had previously tried quinine without effect. Dr. Talbot reports four such, treated with the fluid extract, in whom quinine had failed; and Lorinser, nine out of eleven, with tincture of the Eucalyptus.

Burdel, (Bull. Gen. de Therapie, May, 1873,) reports fifty cases of quotidian, thirty-nine of tertian, and thirty-four of the quartan type treated with the powdered leaves, tincture, watery and alcoholic extracts of Eucalyptus. The treatment was from five to ten days duration. In eleven cases only, does he report cures without relapse. Twenty-two cases relapsed after five, thirty-three after nine days; and in fifty-seven cases he derived no appreciable benefit whatever. In the eleven cases cured, he

noticed that debility was of longer continuance than after the usual quinine treatment.

After changing the method of its administration, Burdel obtained better results with regard to permanency of relief. He gave, subsequently, the alcoholic extract in pills, from ten to twelve grains daily, in quotidian, and double that quantity in other forms; continuing the drug five or six days after subsidence of the paroxysms. He denies, emphatically, the efficiency of any of its preparations in malarial cachexias.

Castan (loc. cit.), Wasserzug (Schmidt's Jahr.), Berstrend (Gaz. Med. de l' Algeria, No. 12) Mees (loc. cit.) and Strube (Berlin Klin. Wochen., 1872,) have used, and regard with favor, the Eucalyptine preparations, in the different types of intermittent fever. Castan records thirty-three complete cures out of forty-four cases, to whom he gave the powdered leaves, tincture and extract. In thirty-five patients treated with the tincture, Mees reports thirteen cured, ten greatly benefitted and twelve but little relieved. Strube used the tincture in drachm doses and obtained perfect cures therefrom. He reports on eight such, only.

Lorinser (loc. cit.), Gimbert (loc. cit.) and Herr Bohn (see American J. Med. Science, 1872) have been successful with the use of Eucalyptus in periodic fevers. Lorinser used the tincture with fifty-one patients, of whom, forty-three were perfectly cured by it alone. In one of his cases, both quinine and the tincture were unavailing; one could not retain it, and another refused to give it a fair trial. Herr Bohn reports the case of a child of seven years, suffering from "masked intermittent" with cerebral complications, to whom he administered the tincture in doses of one drachm, with complete arrest of the disease in four hours. He believes the tincture would be of much service in treating puerperal fever of an intermitting type.

Of those who have used it unsuccessfully, *mention may be made of Blenioss (Memorabillian, 1873) who greatly prefers quinine in all forms of miasmatic fevers, Siatz (Bayr. Aerzt. Intelligenzb., 24, 1870) who failed to detect any remedial effect from its use in intermittent and typhoid fevers, from preparations made from trees raised at Munich. He did not know if they contained the active principle in strength equal to the trees grown in Australia. Papillon (Gaz. Hebdom. Med.) asserts that he used, for three months at Mascara (Algeria), the Eucalyptus in every form of its preparations, without any appreciable benefit whatever. Binz (Gottengen Klin.) tried the tincture in three cases of intermittent neuralgia, with no perceptible palliation of the disease.

The use of the Eucalyptine preparations have not been confined to diseases revuiring an anti-periodic. Gimbert (loc. cit.) exhibits and recommends the oil in minute quantities, as a stimulating antiseptic, in tooth washes, gargles, collyria, and as a dressing for hospital gangrene, foetid discharges and suppurative fevers, as well as declares it an excellent disinfectant. For the same reason, it has been favorably noticed and used by Gubler (loc. cit.), Cochet and Demarquay, (Ibid) in phagadenic ulcers, stomatitis and leucorrhoea; also, as an astringent and haemostatic, and as a balsamic remedy in chronic inflammations of the air, and urinary, passages.

Lorinser (loc. cit) and Herr Bohn (loc. cit.) both regard it as a fit remedy in hectic fevers. The latter found the tincture of Eucalyptus vastly superior to quinine in some cases of this disease.

Siegen (Ueber die Pharmacologischen Eigenshaften von Eucalyptus Globulus: Inaugural Dissertation), after an exten-

*NOTE.—Dr. Hermann Oeffenger (see Amer. Journ. Med. Science. April. 1874) describes two species of the Eucalyptus Globulus. One he calls E. Globulus latifolius, the other, longifolius. His experiments demonstrate, that there is little or no value in preparations of the former, while those of the latter "scarcely ever failed." To this difference, the Doctor "ascribes the contradictory results obtained by various writers on this subject"

sive investigation of the therapeutical properties of Eucalyptol, concludes that in large doses, it is very beneficial in febrile diseases associated with morbid conditions of the respiratory organs; and especially so in pertussis. To a child of eight years, thus affected, he gave fifteen drops every two hours with the happiest effect. He also found that it acted as an anthelmintic in several cases to whom it was given. M. Vidau (Med. and Surg. Reporter, Jan., 1875,) confirms the potency of the oil as a vermicide, by relating, to the Societe de Pharmacie, the case of a Zouave upon whom had been tried, ineffectually, "every vermifuge in the dispensary of" a "military hospital"—among which, were all the infallibles—subsequently relieved by enemas containing fifty or sixty drops of the drug, every evening for eight days.

Dr. M'Lean (Practitioner, Nov., 1871,) commends the leaves made into cgarrettes, or smoked in a pipe, with or without tobacco; and where this is impracticable, inhalation of fumes from the burnt leaves, for dyspnoea in thoracic aneurism, and in cardiac asthma. He believes—after sub-cutaneous injection of Morphia—nothing is better for "allaying pain, relieving dyspnoea, calming irritation and procuring sleep, in patients suffering from the distressing symptoms induced by presure on the vagus and its branches, caused by aneurisms rising out of the chest," than the Eucalyptus Globulus. For spasmodic asthma, Gimbert employs equal parts of spirits and the liquid extract, by inhalation. As a topical remedy in neuralgia, Gimbert employs the essential oil sprinkled on flannel, a few drops at a time, or a liniment composed of eight grammes (two drachms) of Eucalyptol to forty grammes (ten drachms) of the oil of sweet almonds.

A French captain (New Remedies, Jan., 1875,) unable to abandon his pipe, though causing him much inconvenience, and impairment of health, has used as antidotal for such, several years, a few dried leaves of the Eucalyptus with his tobacco.

Since that time, he has experienced neither headache, vertigo nor pain in the stomach. He esteems this mixture highly for combating unpleasant effects of the pipe, without compelling its abandonment.

ADMINISTRATION.

"The oil (Wood, loc. cit.) offers the most eligible preparation of the Eucalyptus: in bronchitis, from four to ten drops may be given in emulsion or capsules, at intervals of two or three hours; as an antiperiodic, from half a drachm to a drachm may be exhibited, two or three hours before the expected paroxysm. The saturated tincture, from Australian or Algerian leaves, is efficient. Dose, a drachm to half an ounce.

Gubler (loc. cit.) prefers the pulverized leaves, from one to four drachms daily, in intermittents and tuberculosis. He also uses an infusion or decoction, made with two drachms of the leaves to one litre (about a quart) of water.

Burdel (loc. cit.) employs the alcoholic extract in pills, giving from ten to twenty grains daily: Talbot (loc. cit.) the fluid extract in doses of sixty drops, every hour and a half, in intermitting fevers. Gimbert (loc. cit.) deems the oil or fluid extract preferable to the powdered leaves, for internal use. He regards the latter as being bulky, and difficult to digest.

In the foregoing pages, the author has endeavored to embody, in a manner as concise as was thought compatible with precision, the observations of those who have investigated the subject. Studiously refraining from deductions of his own, he has presented such evidence as could be gleaned from literature covering the space since the Eucalyptus has challenged attention from modern therapeutists and economists, that his readers might be the better enabled to form opinions of their own, and decide for themselves, what value, if any, may be attached to, and benefits derived from, the plant, under the different headings into which

its consideration has been divided. Disclaiming any orginality for himself, he craves the largest measure of indulgence where he has misstated, or failed to give due credit to those, from whose works he has extracted whatever of merit his paper contains. With a consciousness of its many imperfections, the author closes this Essay, believing that well directed efforts, however feeble, seldom fail to be duly appreciated when passed upon by liberal minded men.

REPORT ON THE SCIENCE AND PROGRESS OF MEDICINE.

BY JNO. H. POPE, M. D., CHAIRMAN OF COMMITTEE.

To enquire what progress Medicine has made since our last session is one of the interesting and instructive duties connected with our annual meetings. For this purpose, doubtless, your committee was appointed. When we say that its duty is to sum up, or point out, the progress our science has made, in the last twelve-month, it will not be understood that we are able to state it with anything like mathematical precision. One year hardly suffices to indicate even the tendency of medical opinion on debated problems; a decade scarcely does so, but in exceptional cases. There is a striking and important difference, in this particular, between medicine (strictly so-called) and surgery; and it materially affects the comparative progress of the two branches of our great profession If new surgical appliances are invented, the conditions affecting their application are more easily judged of; if a new detergent is suggested for suppurating wounds, the effects are more readily compared with those of the old one, and we are able to fairly contrast them. Give me

salicylic and carbolic acids, to test the comparative merits in arresting suppuration—it is not a very difficult matter to select two wounds, affected by similar conditions, and make the application of known strength; compare the notes of the two cases, and come to something like a satisfactory conclusion. Not so in testing the effects of certain remedies on a given disease. In the present state of knowledge, it is impossible to say whether the dose, in each case, is the one most effective in controling the disease, as it is in that particular organism; whether, when it is given, it is absorbed; whether certain symptoms that arise are a *post hoc* or a *propter hoc* of the medicine administered. And so I might go on enumerating doubts that would arise, and all of them legitimate. We see, at once, how many repetitions of an experiment are necessary, in the one case as compared with the other, before all error can be eliminated. Following out, and applying, this same line of thought to departments of medicine other than Therapeutics will satisfy us that there should be no wonder that medicine makes, seemingly, such slow progress; and that a year affords us so little that we can point to as steps, positively acknowledged to be progressive.

It is best that medicine, under the circumstances, should be thus slow in developing a new position. It is a palpable truth that nine-tenths of the medical world wait for the other one-tenth to investigate for them; the majority blindly obeys the dictates of the minority; and it behooves the latter, in the interest of mankind, to be cautious what orders they issue. The thoroughly conscientious and scientific among them have seldom disappointed us. The very potency of the life of medicine lay in the patient research and faithful records of her immortal father; and since his day those who have strongly impressed

the medical mind have followed the example of this "divine old man."

Investigators in the department of *Physiology* are now as earnestly discussing the "Mystery of Life," as they did when Grove, Mayer and others promulgated the law of "Conservation of Energy." There are some who still cling to the doctrine of "vital action." These draw a sharp line, and make the difference absolute, between the living and the non-living world. The tendency of belief, to-day, is decidedly toward the physico-chemical theory of life. Lionel Beale is conspicuous among the exponents of the vitalist doctrine. He has recently completed a course of exceedingly able lectures before the Royal College of Physicians, London. The basis of life (if I may so call it) is, according to Beale, the structureless, colorless, Bioplasm. If a particle of this, large enough to be seen by the aid of a microscope, is surrounded by a layer or capsule, such layer is of secondary, formed, material; and is dependent upon changes in the bioplasm. I will state, in this connection, that Prof. Louis Elsberg, suggests that the term *bioplasson* is etymologically more properly applied to the colorless, structureless, primary, material; and *bioplasm* more properly expresses the secondary, formed, material. The vitalists acknowledge that electro-chemical changes play an important part in the development, growth and multiplication of the *speck;* but they contend that, behind such electrical or other currents, are changes *in* the bioplasm (according to Beale) that make such currents possible; and which provide for their continuance. If asked, where the life of the bioplasm begins, Beale would answer, "in its most central centre." He attempts nothing farther; and acknowledges the impossibility of bringing the mind face to face with the actual first changes. Nevertheless,

he still insists that the *cause* is central. "The power that influences must be more central than the matter influenced." and the forces act, not toward, but from, the centre.

The Physico-chemists trace the activity of the bioplasson to an external source—ultimately the sun. The structureless bioplasson is conceived to be in a state of perfect quiescence; its molecules at rest, its vitality dormant. Thus, it lies stored with "potential energy." Heat is derived from the sun, and applied to this speck of bioplasson. This thermal energy is, under certain conditions transformed into its equivalent of electrical, chemical, or other energy. Work is now begun in the little laboratory; the molecules are set in motion; changes take place in the relations of its atoms; the speck of dormant bioplasson nourishes, grows, multiplies—in other words, *lives*. The forces operate from without toward the centre, not from the centre toward the environment.

To even intimate the steps, according to present belief, in the differentation or growth of this corpuscle into a complicated organism, would occupy more than the space allotted to this report. I will only say that the tendency of opinion seems to be growing stronger, in favor of the bioplasson, as opposed to the cell, theory of development.

The theory of *Inhibition* has been proposed to explain certain phenomena, connected chiefly with the circulation. When first suggested, its opponents called it blowing hot and cold—to say that excitation of nervous centres would, in one instance, increase the action of the heart, and, in another, lessen or inhibit it; in one instance cause the arterioles to contract, and, in another, to dilate. But facts, for the present, not explainable on any other hypotheses, strengthen the probability of the existence of inhibitory centres. It is supposed that

ganglia, distributed along the course, and toward the extremity, of a vaso-motor nerve, "have other nerves connected with them, possessing an inhibitory or restraining power over the generation or discharge of their motor force." When the heart would act inordinately, through some influence brought to bear on the motor centre, then this inhibitory centre stands ready, like a "better half" of the motor centre, and restrains it. When, for purposes of nutrition or something else, it becomes necessary to have more blood to a particular part, the influence is brought to bear upon the inhibitory centre; it is stimulated: the motor influence is overbalanced; the tonic contraction of the walls of the arterioles is lessened, and they are dilated by the pressure of the blood current. The action of many medicines is explained by its stimulating or paralyzing effects on one or the other of these centres.

ETIOLOGY AND PATHOLOGY.

There is probably nothing of more importance to us, as guardians of the public health, than a thorough study of the pathology of acute Infectious Diseases, embracing such as Small Pox, Yellow Fever, Cholera, Typhoid Fever, etc. They are more formidable, because they tend to become Epidemic, and threaten whole communities. This class of diseases was, at one time, more feared than the army of a conqueror—witness the Plague of London. The Black Death of the fourteenth century turned the tide of civilization; and historians recognize the pestilences as prominent forces in working the downfall of Greece and Rome. And we of to-day, as we grapple with the monsters, yellow fever and cholera, "can," in the language of a German author, "have but faint idea, through what we see around us, of the devastation that can be accomplished by epidemic diseases, and of the significance they have had in the whole rise of civilization." Such scenes as fourteen thousand dying at one place, Basle, were

enough to make men think, and to recognize the importance of a more thorough study of this class of diseases. The importance increases *pari passu* with the facility of communication between neighboring and distant cities and countries. It should stimulate medical men to redoubled exertion—the thought that their old duties become more urgent and new ones press upon them with the advance of civilization. That much good has been accomplished by the study of the Etiology and Pathology of Infectious Diseases will not be gainsaid, when we contrast our worst epidemics of this century with those of the fourteenth, that carried off one-third of the entire population of Europe. We now have more correct notions of the laws of their action; and we may reasonably hope, that, at no very distant day, will have a knowledge of their real nature and cause. With microscope and crucible, investigators are earnestly at work, the wide world over.

Sir William Jenner has announced his belief, that there will never be such a discovery as a cure for an acute infectious disease, after its action is once established in the system. That is, no remedy will ever be able to shorten the natural duration of such a disease as Typhoid Fever. The cause of the disease once in operation, the subsequent phenomena are necessary, and they are but indices of the changes necessary to restore the body to health. The same high authority goes on to say that, "though the science of medicine can never hope for a cure of, it can prevent death from, these diseases, if only the public will appreciate correctly what medicine can, and what it cannot be expected to do in this class of diseases." To prevent diseases is surely as worthy of our work, as it would be to cure them. But for the purpose, it requires the cordial co-operation of the people.

The theory of a *contagium vivum* as the case of the acute Infectious Diseases is constantly gaining favor. This doctrine has

risen and sunk and risen again, in the sea of medical opinion, bringing, each time that it comes to the surface, new facts to buoy it up. Some observers claim to have found certain low organisms in the blood of patients suffering with certain of the infectious diseases. Others acknowledge their presence, but deny their significance and say they are accidental. But, if we remember, the itch mite, when first discovered, was said to be an accidental accompaniment of scabies; now it is acknowledged to be the sole and sufficient cause of this disease.

This theory of a *contagium animatum* was arrived at inductively, and is found to harmonize with the many facts since discovered. One law of this class of diseases is *specificness*. Each member of this class is a disease *sui generis*. This readily reconciles with the idea of a *contagium vivum;* each disease having for its cause a particular parasite or fungus. There are some of these diseases, that in former centuries almost depopulated cities, but are now scarcely heard of. The "survival of the fittest" may explain the disappearance of some and survival of others; for we can concieve that the conditions, upon which the multiplication of the organisms depended, may have changed with the progress of civilization. Again, there are diseases, known to us of this day, that the ancients seem to have been ignorant of. Syphilis is one of them. The believers in spontaneous generation are not at a loss to account for the first case of this disease on the theory we are discussing. The adherents to the doctrine "*omne vivum ex ovo*" would explain it by supposing that the germ of the disease had existed outside the human body, or, at any rate, under conditions unfavorable for its propagation. But it is not necessary to multiply arguments on the subject; they are to be found in many of the most recent works on Practical Medicine.

THERAPEUTICS.

Some of the proposed new remedies, for the past few years, have disappointed expectation.

Jaborandi, the new sudorific, has not fulfilled promises made for it. It is costly, hard to obtain free from adulteration, and little or no better than other members of this class of medicines. Some claim for it virtues as a galactagogue.

Propyllamin has several records in its favor, as a remedy in acute rheumatism. *Benzoate of Lithia* is also recommended, in gouty and rheumatic affections, by several high authors. *Salicine and Salicylic acid* are the latest, and probably the most strongly recommended, remedies for acute rheumatism. Some give the Salicylic acid in seven grain doses every hour, until the pain is relieved. Nothing more unfavorable follows such doses, than a burning sensation in the stomach and probably some griping. A reliable remedy for this disease is much wanted; and we should apply the crucial test—the bedside—to these and all other new remedies, before pronouncing for or against them.

Nitrite of Amyl is represented as the most appropriate anaesthetic, in cases of weak heart action and great debility, where chloroform would be dangerous. On the other hand, there is an able defense of chloroform, (as compared with all other anaesthetics, in every case where such a remedy is needed,) in a lecture recently delivered by Dr. McLeod, of Edinburg. He claims, that, if we understand before hand the effects of the substance on the various vital organs, and attend closely to its administration, there is seldom occasion for death on account of it. In a very large private and hospital practice, extending over a period of many years, Dr. McLeod has never had a death from chloroform, when administered under his immediate supervision.

The medical journals contain many cases of reputed success with *Croton Chloral Hydrate* in facial neuralgia. We have several times given it freely, in this common trouble, but have always found it inferior to Chloral Hydrate.

The class of *Disinfectants* grow in importance, as the prophy-

laxis of disease is more studied. *Carbolic acid* still holds the first position here. Its offensive odor is the principal objection to its extensive use in the sick room, hospital or street. *Salicylic acid* has the recommendation that it is practically odorless. But it is not so powerful a disinfectant, and hence not so well adapted for use on a large scale. It is admirably suited to the sick room of patients attacked with diphtheria, dysentery, cholera, etc. It will also probably prove "serviceable in preserving water on long sea voyages." Kolbe has found that one part of this acid will keep two thousand parts of "pond water, in casks, perfectly fresh, four weeks, in a warm room." It has been used internally in various affections, as rheumatism, dysentery, etc. It is perfectly innocuous in quantities of 23 grs. per day for two days, according to Kolbe's experiments on himself.

A new kind of *poultice* has been suggested by the Paris chemist, Lelievre. "The substance is extracted from the *Fucus Crispus*, and can be preserved in sheets like paper." For use, a piece of suitable size is cut and dipped in warm water; it swells rapidly, softens, and can be applied immediately. MM. Jules Lefort, Gosselin, Verneuil and Dumarquay, who have used it, praise the substance highly, claiming for it the following advantages over ordinary poultices of linseed meal: that it does not slip from its proper position; has no unpleasant odor; does not soil the linen, and can be used over again many times.

Electricity is being more rationally applied of late years; the means of applying it made more accessible to the profession, and it bids fair to occupy a permanent place as a diagnostic and therapeutic agent. One of the important applications of this agent is to excite contractions of the relaxed, inert, uterus, after labor, when the hemorrhage seems to threaten life.

Pneumatometry is attracting attention in this country and Europe; the methods of applying are being simplified and cheap-

ened, and there is a probability of its being made accessible to most practitioners. Various apparatuses have been suggested, but the one known as Waldenburg's seems to have most favor. The very best authorities speak in high terms of the use of condensed and rarefied air (by means of the Pneumatic Cabinet), in treatment of Emphysema, Chronic Bronchitis and other obstinate lung affections. "The inhalation of condensed air increases the pressure and afflux of blood in the aortic system, impedes the flow of the blood from the veins into the right heart, thereby lessening the amount of blood in the lungs." This instrument is also thought to be the best means of testing the capacity of the lungs—an important object in connection with Life Insurance.

The use of *cold*, in the treatment of Hyperpyrexia, is recommended by such high authority, that we should be emboldened to try it oftener than we do. It is claimed that, in Pleuritis and Pneumonitis, the application of cold to the chest lessens the pain and suffering, and is grateful to the patient.

The very best judges assert that Brand's method of treating Typhoid Fever, by cold baths, improves the respiration, and increases the vigor of the heart contractions; that the secretions reappear, the tongue gets cleaner, and thirst and meteorism lessen. One suspicious point, however, is that Dr. Brand insists that he cures all of his patients by this method. Still, the statistics given by Wunderlich, Jurgensen, Liebermeister, and others show the mortality to be much less, when the disease is treated by this method, than the average under other methods of treatment. The baths should be begun early in the disease, and kept up until convalescence is established. Sometimes, treatment will require from fifty to two hundred baths. The fever will still run its twenty-one days, but the suffering will be less, convalescence shorter, complications avoided—"except an abundant crop of boils." Bedsores are never seen. So say the most favorable reports.

On the other hand, it has been observed that hemorrhage and neuralgias are more frequent accompaniments of this method than of any other. Dr. Blanc, of the British army, has published some observations that go to show that this treatment is still more efficacious—the duration of the disease being shorter—where the antiseptic treatment is combined with Brand's method.

Ergot is proving to be one of the most reliable remedies in the pharmacopœa, and its application in disease is yearly extending. Any one, who has fairly tried it must acknowledge its power as a hæmostatic, when internally administered. It has proven to be excellent in Diobetes Insipidus—in short, wherever there is indication for stimulating the contraction of the arterioles.

The *root* of the *Cotton Plant* is now officinal and has been found applicable as a substitute for Ergot in almost all cases.

Turpentine is highly spoken of, in Ziemmsen's great works, as a topical application in severe cases of Erysipelas. So also are *hypodermic injections* of *Carbolic acid* around the seat of Erysipelatous inflammation. In place of using Carbolic acid hypodermically, Dr. Jocobi, of New York, recommends a mixture of Carbolic acid and Oleic acid, to be rubbed on like an ointment. Oleic acid has been found to penetrate the skin very readily. This property of Oleic acid suggests further extension of its usefulness, e. g. in the administration of quinine, in many cases of Malarial Fever, where the stomach will not retain it; also in administering it to children, where the taste of the medicine and tender years of the patient render its exhibition so difficult.

Hypodermic Medication is becoming yearly more popular, and the time is not far distant when no physician's armamentarium will be considered complete without the *Hypodermic Syringe.* The most recent application of this instrument is for the purpose of giving nutritious substances. Some of the experiments recently

published are interesting on this point. Cod Liver oil is considered the substance best adapted to this plan. Considerable quantities of it can be inserted into the connective tissue, without evil consequences; and the biliary constituents of the oil are an advantage toward its assimilation. The demonstration of the feasability of this means of nourishing the body would create quite a sensation in the medical world.

Sulphate of *Atropia,* in doses of the one one hundred and twentieth of a grain, given hypodermically, has been found very efficacious in arresting night sweats.

It has been proposed that the official (officinal) names of many medicines be changed, so as to conform to the advances in chemical science. For example, what used to be written Potas*sae* Chloras must now be Potass*ii* Chloras; for advanced Chemistry applies all the oxygen to the *acid* and leaves the *base* a simple metal—not the oxide of a metal as heretofore. So with other compounds of like nature. This change is proper, and should be promptly seconded by the practitioner in his prescription writing.

We are aware that this Report is not an exhaustive treatise on any branch of the subject discussed, but partakes of the nature of an essay—indicating the present status of medicine on certain important points, and suggestive of the tendency of medical opinion. We trust we have said enough to show that the science of medicine is making progress. There are some who even practice medicine, and yet deny that it is progressive; and they point to the rise and fall of the many theories to sustain their position. But, to us, such men seem more like the child who looks to the rapid swaying of the pendulum, instead of the slowly moving hand on the dial-face, for proof of the progress of Time.

The Science of Medicine *is* Progressive. It has followed, in

its development, the course of every other science, for example, Astronomy or Geology. First, superstition, in great part; then the records of facts—deductions of principles and laws therefrom; disputes about these; elimination of error; and finally, one by one, the truths established with mathematical certainty. If one will but trace the striking similarity between the advance of medicine and of the universally acknowledged sciences, he can no longer doubt that it too is advancing toward established truth—

"———That far off divine event,
To which the whole creation moves."

In closing its report, your committee begs leave to offer what they believe to be an important and practical suggestion. The study of the nature of Infectious Diseases offers a fine field for medical investigators. It should particularly interest us of the interior. For here, in comparatively small and isolated towns and cities, we may hope to see every step of an epidemic, and be, thereby, enabled to study its mode of spreading. The important bearing a more thorough knowledge of these diseases would have on the question of quarantine and sanitary law, generally, is patent to every physician. The many facts, already recorded and accumulated, are chiefly from hospitals and decimating epidemics in large cities. The observers form but a small squad, in the great army of medical men—the more honor to *them*; and the observations were made where it is impossible to trace, with any certainty, the steps of an epidemic. Every lover of the profression of medicine should be a careful observer and an accurate recorder of his obervations. The blanks, now published for this purpose, render this duty light, compared with what it used to be. Yet, most of us are derelict in this very important matter; and we can hardly compute how much such neglect, on the part of the mass of medical men, contributes to the struggle medicine has to make in her efforts to advance. We leave to the physician of the metropolis the study of disease, and

are satisfied with obtaining our knowledge second hand; notwithstanding our opportunities are often better than his. If each of us would do his best, and were but half as earnest in his work, as was Harvey, or the Hunters, or McDowell, or Anstie, we have no doubt many truths, now unrecognized, would be established, concerning specific, as well as other diseases; many things now only probable, be rendered certain; and medicine make more rapid steps toward her true position with the van of Science.

REPORT ON GYNÆCOLOGY.

BY THOMAS D. WOOTEN, M. D., CHAIRMAN OF COMMITTEE.

The marked attention and interest given within the last few years to diseases peculiar to women, coupled with the advances made in the physical diagnosis and surgical treatment of the same, have contributed to impress the public professional mind with the idea that *Gynæcology*, properly so-called, is of very recent origin, and that we, to-day, as a profession, are far ahead of our predecessors in this branch of medical science. Upon a closer retrospect, however, we find many of our most vaunted diagnostic agencies, and the most valuable contributions to modern Gynæcology, to be but a revival of means known to writers of a past age. The vaginal speculum was in use in the first and second centuries, as referred to by Galen, Celsus and others. Thirteen hundred years ago, Aetius wrote on Gynæcology, and speaks of the use of the speculum, sponge-tents, the sound for replacing the uterus, medicated pessaries, vaginal injections, caustics for ulcer of the cervix, dilatation for uterine stricture, periuterine cellulitis, etc. The ancient Greek physicians used air pessaries. There is at Naples, in preservation, a bivalve uterine speculum, taken from the ruins of the city of Pompeii, not very unlike those in use at the present day. The uterine speculum was well known to Ambrose Pare and Scultetus. Hippocrates and writers of his day allude to the use of the uterine sound.

I make mention of these facts, without entering more minutely into the history of the subject, to indicate that Gynæcology has a literature ancient, if not renowned; and to show that our

present knowledge on the subject is, in the main, but a revival, improvement, and utilization of means long known to medicine The investigation of this subject recalls, with forcible significance, the proposition promulgated by Aristotle, two thousand years ago, that "probably all art and all wisdom have often been, already, fully explored, and again quite forgotten." To illustrate by how weak a tenure professional knowledge is held, and how soon even an important discovery may fall into disuse, I cannot do better than refer you to Dr. Sims' operation for vesico-vaginal fistula, which gave such merited reputation to his name. The operation was described and practiced twenty years before, and in that brief space was forgotten, and revived, and accredited as a new and original operation.

However, it requires but a casual investigation of the subject of Gynæcology to give satisfactory and conclusive evidence, to even the most incredulous mind, that the medical profession of to-day have ample and sufficient reason for self-gratulation; if not so much in the claim of priority of discovery, at least in the practical utilization and perfection of agencies and means, already discovered to it by those illustrious names which have gone before. While we cannot question the fact, that the speculum, uterine sound, sponge-tents, and several of the diseases connected with the uterus were not unknown to the physicians of even a remote period, yet it is abundantly evident that the true diagnostic value, nature, and importance of these agencies and diseases were but feebly understood and appreciated by them. To the physicians of the nineteenth ceutury is due, in a very large degree, the present *status* of Gynæcology.

I shall not occupy your time, even if it were consonant with the limits assigned this report, by attempting even a concise history of the rise and progress of modern Gynæcology; but shall be content to offer a few thoughts, having reference to the more practical bearings of the subject.

Near the close of the last century, the advanced views of Garangeot and Astruc, of France, and Clark, Hamilton and Denman, of England, gave indications of the era that was about to dawn. In the beginning of the present century, the field was most prominently occupied by Sir Charles Clark and Gooch, of England, and Lesfrance and Recamier, of France. To Recamier is, perhaps, due the credit of giving its intrinsic importance to the use of the speculum, as his publications in 1818, on that subject, exerted great weight toward a recognition of the practical utility of that instrument. He was likewise among the first to advocate the use of the uterine sound and curette, and to no other name does modern Gynæcology owe a greater debt, as there is probably no other which has contributed so largely toward the present advanced status of that department of medical science. At that early day, Gynæcologists were divided into two parties. In France, the local uterine trouble was disposed to be regarded as essentially the disease, while in England, the tendency was to regard the local trouble as a concomitant of a constitutional derangement. Hence arose the diversity of opinion in respect of treatment, the influence of which has, perhaps, not yet ceased to be felt by the profession. The great advantages offered by the use of the speculum, both as an aid to diagnosis, and a means of treatment, soon secured rapid advancement in the science. The application of leeches to the cervix was advocated in 1826. The uterine sound was fully introduced to the profession, in France, in 1828, by Samuel Lair. M. Melier, in 1832, urged the use of medicated injections into the cervix, and medicated dossils of lint locally applied through the vagina. These measures, however, had been previously suggested by Astruc and other writers. To Sir James Simpson is due the credit of bringing into prominence and more fully utilizing some of the most important

means of diagnosis—particularly the urterine sound, dilatation of the cervical canal by sponge-tents, etc. His papers on pelvic cellulitis, hæmatocele, uterine flexions, etc., were most invaluable acquisitions to the literature of the subject, and had a wide-spread influence. Dr. Bennett, of London, was almost equally prominent, as a leader of the professional mind, in the rapid advances that were being made in this important branch of medical science. No work on the subject of Gynæcology had a wider-spread, or stronger, influence in moulding professional opinion, than his book on uterine inflammation. He insisted most strenuously, that inflammation was the prime morbific cause of all uterine affections, that displacements, ulceration, menstrual troubles, leucorrhœa, etc., were but results. He also maintained that, in the large majority of cases, the inflammation was confined to the cervix, and needed but the use of strong caustics for its relief. These very decided views led to much controversy and discussion, which, doubtless, contributed very much to the enthusiastic investigation and research of that day. Dr. Bennett's more recent views, as expressed before the British Medical Association, in 1870, contain a material modification of those embodied in his work of 1845, and correspond more nearly with the present rational and accepted veiws on the subject. The pathological idea embraced in Bennett's works, is a very old one—runs back even to the Greeks —and has, to-day, a very strong hold on the professional mind.

A second party have maintained that the greater part of all uterine troubles have their origin in, and are dependent upon, constitutional derangements, and require only constitutional treatment for their relief. Dr. Tyler Smith and others, of this school, have contended that leucorrhœa arises from glandular inflammation, causes granular degeneration of the parts, and is

the source of many uterine troubles. Many distinguished names in the profession have maintained, and still hold by the opinion, that all the uterine derangements have their origin in displacements.

Other pathologists look to ovarian inflammation as the most frequent source of uterine derangements, by virtue of the very close sympathetic relation subsisting between the uterus and ovaries, and they consider the relief of the latter to be the essential indication of cure. With such a conflict and variety of pathological ideas as guides to curative indications, it is not at all astonishing that we to-day have such a diversity of opinion among the profession in regard to therapeutic indications. The enthusiasm, inspired by the discussion of these several antagonistic views, contributed, without doubt, to the advancement of Gynæcology, by stimulating investigation and research. The continual strife between these rival and opposing schools, being thus an essential feature in the progress of this branch of medical science, the study and collation of these researches and of the different pathological ideas, successively presented and championed by the contending parties, are essential to the present thorough practical knowledge of the subject.

The inflammatory theory was the one most generally accepted in the early part of this century. Discarding the heroic caustic treatment, advocated by Dr. Bennett, excluding the prejudicial opposition to the use of pessaries under any circumstances, and recognizing the timely and judicious use of uterine supports, and the morbid sequences of displacements—these may, I believe be taken as the most salient points in the generally accepted doctrine of treatment, among the profession, at the present time. There are, however, not wanting many distinguished writers, who advocate the opinion that, in the

large majority of cases of uterine derangements, displacement is the prime and original cause; that engorgement and inflammation are but sequences, and that the treatment consists, essentially, in correcting the mal-position. Velpeau maintained this view of the subject. The student of to-day, in prosecuting his investigations on the subject of uterine disease, meets with much to confuse his mind, and involve in perplexity the results of his labor. This is due to the want of determinateness in our present nomenclature of the subject. Take, for instance, the uterine condition, ordinarily termed "Chronic Parenchymatous Metritis." He will find some of the most distinguished and prominent writers of the day rejecting this appellation, and insisting that some of the essential elements of inflammation are wanting in the disease under consideration. They, therefore, insist that the term employed is vague as applied to this uterine condition, and should be expunged from the vocabulary of uterine diseases. They contend that perverted alteration of the vascular tissues, resulting in exudation of *liquor sanquinis*, is essential to the inflammatory process; and such perverted alteration being absent in this instance, the term used is a misnomer. They have consequently substituted and employed various others, as expressive of the pathological condition which obtains, in this particular uterine disease. Dr. Peasley uses the term "Congestion;" Lesfranc, "Engorgement;" Hodges, "Irritable Uterus;" Klob, "Habitual. Hyperæmia;" Kowisch, "Infarction;" Carl Shroeder, "Hyperplasia;" Thomas, "Areola Hyperplasia." The phenomena and consequent changes, resulting from traumatic inflammation of the uterus, or from the inflammation following the puerperal state, are different from the sequences and phenomena attending that form of uterine disease attempted to be designated under the appellations above named. This consideration leads us to conclude

that true "Chronic Parenchymatous Metritis" is of rare occurrence, and is certainly not identical with that pathological condition, whose presence is a never-failing accompaniment of inflammation proper, as applied to other organs. A satisfactory solution of this complex question, however, is still in abeyance, and it is extremely difficult to differentiate the views of the various writers on the subject, owing to their conflicting terminology. That ever-recurring and, as yet, inadequately answered problem—what is Inflammation ?—is the constant preventive of a final adjudication of the matter, and tinges with vagueness and uncertainty all terms based upon its present incomplete solution.

Leaving out of account the inflammatory changes consequent upon child-birth, *Acute Endo-metritis* is a disease of unfrequent occurrence. It is most apt to occur during the menstrual period, from exposure to cold, and from the operation of other causes interfering with the normal state and healthy functions of the uterus. The catamenial period is one of local excitation of the womb and other sexual organs, and any additional excitement or irritation may produce Acute Endo-metritis. This disease is characterized by the well-known changes peculiar to acute catarrh of the other mucous membranes. No especial treatment is indicated, other than perfect quietude and rest, and the avoidance of every source of irritation; local blood-letting is also of potent value when the uterus is much swollen. Acute Endo-metritis may pass into the chronic stage, and the latter is the disease to which I desire, more particularly, to direct attention.

Chronic Endo-metritis, or Catarrh of the uterus, is of frequent occurrence, and, like metritis, it has received various appellations. The leucorrhœal or catarrhal discharge, attendant upon this disease, was for a long time regarded as emanating alone from the vagina. It has been decided now, however, that vaginal catarrh, existing by itself, is of rare occurance. It is a much disputed

question which is the more frequent catarrh—that of the mucous membrane of the *corpus*, or that of the *cervix*. West and others maintain the former position, viz: that catarrh of the body of the uterus is most common; while others regard it as very rare. I think it is evident, however, that the cervix is most frequently the seat of the disease. The two are frequently combined, the body alone being seldom the seat of catarrh. When both corpus and cervix are involved, however, the former gives greater gravity to the disease. The etiology of catarrh of the mucous membrane of the uterus clearly indicates that weak, scrofulous, chlorotic women are most predisposed. Cold and moisture are frequent exciting causes; in fact, all influences operating to produce fluxion of the blood toward, and its stasis in, the uterus, favor the disease. The pathological changes incident to this trouble, whether local in the body or cervix, or both, I will not in this short report attempt to trace and define. The morbid sequences, however, which follow in its train, are of such importance as to claim especial attention, in order to proper treatment. While uterine catarrh does not immediately endanger life, yet the drain and loss, incurred through hemorrhage and other discharges, have a most pernicious influence upon the general health; contributing to make this disease a very Pandora's box, from which to derive all those troublesome, though often petty ailments incident to females, and demanding the daily attention of the practitioner. Prophylaxis and the observance of proper hygienic rules are important in the treatment of this disease. Constitutional treatment cannot be over-estimated, in view of the fact that the disease may be the result of chlorosis, scrofulosis, anæmia, insufficient nourishment, etc., and may often be removed without local means. It is, however, to the local, topical treatment that we would now confine our attention.

Scarification of the vaginal portion, in the first stage of the

disease, will often relieve the swollen hyperæmic condition of the mucous membrane. When blennorrhagia or metrorrhagia exists from a granular condition of the mucous membrane, direct local treatment is rendered eminently necessary.

Crayons, composed of tragacanth and tannin, as recommended by Becqueral and Rodier, at one time, were very popular. Nitrate of silver, in this form, has enjoyed even greater reputation, being usually combined with nitrate of potash to render it less friable. The crayons were passed into the cavity of the uterus, and permitted to dissolve in contact with the diseased surface. They were rendered partially inert, by being surrounded by albuminates. Intra-uterine injections have been in use, at different periods, from the days of Hippocrates, now enjoying great popularity, and again falling into disuse. Recently their use in Corporeal Endo-metritis, has been warmly discussed. They form a very efficient means of combating the disease; but owing to the serious and sometimes fatal effects following their use—such as uterine colic, shock, or peritonitis, etc.,—they have become less popular. The manner in which these injections may produce the above serious results, has been a subject of warm controversy; whether the fluid passes into the peritoneum by the propulsive force of the current, by contraction of the womb, or by ciliary action, or whether the injected liquid may not produce metritis and the inflammation spread to the *adnexa* and peritoneum, or irritation of the uterine superficies cause pain, shock and collapse—these are among the mooted queries on this subject. Be the verdict what it may, intra-uterine injections incautiously used are unsafe. There are not wanting, however, distinguished advocates of their use, who maintain that, with due precaution, much good and no evil will result. They insist that favorable cases should be selected—such as are free from inflammatory complication of the uterus itself, or its appendages. There should

be free exit for the fluid, either by use of double canula, or by previous dilatation with sponge-tents, (the latter to be preferred); only a small quantity of fluid should be used; it should be warm and slowly injected from a small syringe, with nozzle shaped like the uterine sound, and having the bulb pierced with numerous small openings; the instrument should be carefully filled so as to contain no air, and when flexion or other obstruction exists, resuction of the fluid should be made. A number of different fluids have been employed in these injections; usually, however, it is either tinct. of iodine, or a solution of the chloride of iron, acetate of lead, nitrate of silver, carbolic acid, tannin or alum. There being other means of applying remedies, equally efficient and much safer than by injections, Profs. Thomas and Barnes are fully justified in condemning the use of the latter. Among the former may be mentioned cauterizing the cavity as first performed by Recamier with the ordinary *porte caustique* or Lente's probe, by painting over the parts with solution, or by ointments left to melt *in utero*. The last named is a favorite mode of application, and may be used with several substances by means of an ointment syringe. Lente's syringe is a good one for the purpose.

Medications may as effectually be applied by using pledgets of cotton; first dilating by means of sponge-tents and cleansing the cervix with cotton swabs or speculum syringe, after which a properly shaped probe is lightly wrapped with cotton, dipped into the fluid, and carried up to the fundus. It is there retained for a few seconds, or the cotton my be left in the cavity for a longer time. A solution of chromic acid, nitrate of silver, tinc. of iod., zinc, copper, the per-sulphate of iron and others may be used in this way, and even pure nitric acid has been successfully applied by the same means. Intra-uterine scarification has been employed in this disease, but is not regarded with favor. When

the granulations upon the mucous surface are large, or when mucous cysts, or mucous polyps exist, they may be successfully removed with Sims' or Recamier's curette, by scraping off the excrescent fungosities.

The galvanic cantery is the most energetic application. Spiegelburg has resorted to it, and considers it free from danger. Where the catarrh, or granular degeneration is confined to the cervical canal, the greatest benefit will be derived from the sponge-tent, as well from its direct local effect as from its influence in dilating and preparing the canal for the application of other agents. I am in the habit of introducing a sponge-tent, well prepared, in the evening, and removing it next morning; carefully cleansing the parts and applying chromic acid by means of a properly curved probe, wrapped with cotton, and dipped into a solution of the acid of the strength of ʒj to ℥j of water. The acid should be brought in contact with the entire diseased surface, any excess carefully sponged away, and a dressing of cotton soaked in glycerine applied to the parts. Nitrate of silver, applied with Lente's probe may be used, if preferred. Iodine, carbolic acid, persulphate of iron, sulphate of copper, zinc, tannin, acetate of lead, nitric acid, or acid nitrate of mercury may be applied in the same way with a probe and cotton. Chromic acid, first recommended by Dr. Sims, I believe to be the most satisfactory agent of the class, leaving the parts in a better condition after a cure is effected; in which respect, it is much to be preferred to nitrate of silver. This mode of application by probe and cotton is most satisfactory in all medication of the cervical canal, and is recommended by Sims and others. Medicated sponge-tents are also a favorite mode of application with some Gynæcologists.

These several methods of application furnish us with resources sufficient to permit the abandonment, without serious loss, of the more dangerous mode of intra-uterine injections.

In severe aggravated cases of granular cervical disease, in which the Nabothian follicles are much involved, their removal is the most favorable and expeditious mode of procedure. This may be accomplished by the use of the curette—a method less liable to result in constriction of the *os* than removal by cauteries.

Within the last few years, very rapid advances have been made in the surgical treatment of the diseases of women. Under the auspices and leadership of Simpson, Wells, Brown and Clay, of England, Esmarch, Ulrich, Schroeder and Heger, of Germany, and Sims, Thomas, Atlee, Emmett, Bozeman, Peaslee, Kimble and Dunlap, of this country, many of the unfortunate conditions of women, heretofore regarded as without the bounds of surgical skill and genius, have been brought within the curative domain of the Gynæcologist. Ovariotomy, ruptured perineum, vesico-vaginal fistula, constriction or tortuosity of the cervical canal, prolapsus uteri, etc., are now constantly performed, and the unhappy subjects of these maladies relieved from the fate which must have inevitably awaited them a few years ago. While then, various operations are now practiced with great skill and success, much to the honor and credit of the profession, some of the more heroic operations, a few years ago in vogue, and performed upon the mouth and neck of the womb, have been abated in their severity and are not so vigorously resorted to as formerly.

The subject of uterine displacement is one of such general interest as to deserve a passing notice in this report. The literature of the subject is confined mainly to the present century, since the absence of Gynæcological examinations in the earlier history of medicine precluded the possibility of any definite or comprehensive knowledge of displacements of the uterus. Their true nature and importance were not recognised until the more perfect utilization of the speculum, sound and other means of diagnosis familiar to modern Gynæcology. The etiology of uterine dis-

placements is of special interest to the southern phyisician, for I am convinced that our cliamate predisposes to this trouble. The predisposing causes, usually recognized, are parturition, enfeebled muscular condition, and the sedentary habits of indolence and inactivity. The exciting causes may be enumerated, as those influences which increase the weight of the uterus, those which force the *fundus uteri* backward or forward, and those which weaken the uterine supports, or drag upon the *fundus* either forward or backward. The removal of the predisposing and exciting causes will not usually restore the mal-position, the disease having attenuated and lengthened some of the uterine supports by the continual tension, while others have shortened and contracted. Hence arises the necessity of not only removing the causes, but of replacing and keeping in position the uterus until the supports have resumed their disturbed functions. It cannot be denied, however, that there are cases of displacement in which general treatment will give satisfactory results; but these constitute a very small minority of the cases demanding treatment, and consist of such only as are dependent upon a flaccid state of the uterine tissues, and appertain to chlorotic, delicate and otherwise atonic patients. In such cases, by strengthening the whole organism by chalybeate tonics, by cold and medicated baths, and with an observance of the proper hygitenic rules, at the same time suplementing this general treatment with local means, such as the cold douche, cauterization and astringent injections, a cure may be expected. I would also further suggest, that a degree of strengthening effect upon the tissue of the womb may be expected from the internal use of ergot.

The most efficient, and the safest means recognized for replacing the womb, is by the hands. The accepted mode of manipulation I need not here describe. The position of the patient may be upon the back, or knee and elbow, as the nature of the dis-

placement may require. The adjustment may be aided by introducing the finger into the rectum, and supporting the cervix with the thumb in the vagnia. In case of failure by these means, recourse may be had, for adjustment, to the uterine staff. If, however, the uterus is tied down and fixed by adhesions, the employment of the staff is a dangerous experiment. Its use is not free from danger in any condition, and should always be attended with great care and gentleness. The lateral movement should always be made with the handle, not with the point of the staff, and the hinged staff is always to be preferred. A simpler and safer means than the sound is by the use of the intra-uterine pessary, as described by Schroeder. The mal-position of the uterus having been corrected, our greatest difficulty is in maintaining it in position. The inquiry naturally occurs, what are the best means for accomplishing that end? The endless variety of the innumerable appliances, brought to the notice of the medical profession, in the last quarter of a century, under the vague title of pessaries, uterine supporters, etc., have contributed to exalt this natural and apparently simple question, into the realm of vexed and unsettled problems.

In retroversion, Dr. Hodge's lever pessary is probably more efficient than any other kind of vaginal support which has fallen under our notice. The closed lever, with single or double curve is preferable to the open lever. His flexible pessaary, made of copper wire, covered with rubber, has the advantage of being moulded to suit any case, which is a point gained. That Hodge's pessary corrects displacement by acting as a lever in raising the *fundus*, is not fully accredited. Shutze's pessary, of recent introduction, for treatment of retroversion, is highly commended, but is probably not to be preferred to Dr. Hodge's. There has not yet, so far as I know, been made, a vaginal pessary for antie flexion, which gives satisfactory results. I have found Prof.

Thomas', occasionally, to act well, but usually, as is the case with all others I have tried, it gives great pain, and cannot be borne for any length of time. Pessaries for displacements requiring external support are not regarded with favor. In all cases in which they are admissible, the intra-uterine pessaries give the most satisfactory results—especially in flexions. I say *flexions*, because simple, uncomplicated *version* seldom exists without undue weight, or inflammatory thickening, for the relief of which other treatment is required.

After the tissues have returned to a comparatively healthy condition, if the womb does not recover and retain its natural position, the intra-uterine pessary may be used with good results. If, however, in version, the attempt to reduce the engorgement is ineffectual, and the worst symptoms are produced by the malposition, or extreme mobility of the swollen womb, we may correct them, until the reduction of the weight and swollen condition can be accomplished, by the use of the rubber-ring pessary.

The intra-uterine pessary should be light, and is, perhaps, best made of ivory or hard rubber. The stem should be well rounded and not long enough to touch the fundus; the knob in the vagina should be round, smooth and not too small. The introduction of this pessary converts a flexion into a version, and this latter may be corrected by introducing wads of cotton between the ball and the anterior or posterior wall of the vagina. The use of the intra-uterine pessary is not unattended with danger, the avoidance of which requires circumspection and care. If the uterus is tied down by adhesions, its use is not admissible; neither should it be used in an inflammatory condition of the uterus or any of the adjacent organs. After the introduction of the intra-uterine pessary, the patient should be confined to the bed for several days.

The attempt to relieve version, or flexion by *surgical* means,

as proposed by Sims, Lowenthal and others, has not proven very satisfactory, yet they are fully justifiable, when other means fail to give relief. Surgical means have also proved futile in prolapsus of the womb. The partial relief afforded, however, is often a sufficient warrant for resorting to such measures. Koeberle has proposed the heroic measure of laparotomy, and fixing the uterus in the lower angle of the incision, but no one, so far as I know, has followed this heroic method.

The subject of *tumors*, both ovarian and uterine, is one that has received much attention by Gynæcologists, in the last quarter of a century. Great advances have been achieved in this department of the science, from every point of view, and especially in diagnosis and treatment. But for the fact of having already extended this report beyond proper limits, I would, in connection with this subject, report two cases of Ovariotomy, I have had occasion to perform since my "Report on Surgery," before this Association, at the last annual meeting. Both of these cases present points of interest. The respective ages of the patients were 42 and 30 years; the tumors weighing 40 and 34½ pounds each. At some future period, I hope, with your indulgence, to present a detailed account of the operations and treatment. Since the report on surgery above referred to, nothing of special interest has been developed in regard to ovarian disease.

The treatment of fibroid tumors has recently elicited such interest that it will, perhaps, be expected that this report should make some reference to the subject. The objects of medication present themselves in a four-fold aspect, or rather, the curative indications are of a four-fold character: to restrain the growth of the tumors, to prevent hemorrhage, to promote absorption or calcification, and to promote extrusion. How far the object of these several indications of treatment have been, or may be, attained by the means and agents now used and recommended, is

rendered questionable by the very etiology and nature of fibroid tumors themselves. Take, for example, Ergotine, an agent to whose curative properties our attention has been especially directed, by numerous reports in the medical journals, favorable to its special action on these tumors. In the first place, only such cases as are seemingly benefited are heard from; its failure to give relief is seldom reported. Another difficulty, arising from the nature of fibroids themselves, which renders uncertain a judgment on the effects of the agents employed in treatment is this: tumors are of extremely slow growth, requiring a considerable time to make them appreciable, and when they reach a certain size they exhibit but little tendency to increase further, even without treatment. In a great many instances, after reaching the climactic period, they show an inertness and even retrogression. They are frequently not brought to our notice until that period has been reached, or is nearly approaching, and the treatment may be merely coincident with, not conducive to, the natural tendency toward cure. These suggestions are presented for the reason that I believe the constitutional effects of internal remedies, in this disease, have been over-estimated. While Ergotine and other agents may feebly aid in the natural process of cure, they are neither very potent nor much to be relied upon. With a view to promote absorption, bi-chloride of mercury has been highly extolled by Wells; Simpson thinks well of the bromide of potassium. Where there are frequent hemorrhages, McClintock lauds the chloride of calcium, first introduced by Rigby, in 1846. It is difficult to understand why fibroid tumors should have greater elective affinity for calcium than is possessed by the other fibrous tissues of the human organism; and if the affinity is common to them all in an equal degree, the use of calcium only helps calcareous degeneration of the heart and vessels—an evil always to be guarded against. Ergot is given with a view to the extru-

sion of the tumor, as well as with reference to the blood supply to the heart. Strychnia, quinia, turpentine, digitalis, lead, opium, gallic acid, Indian hemp, etc., have been recommended as hæmostatics. Local styptics are most to be relied upon to check hemorrhage. Perchloride and persulphate of iron, chromic and nitric acids, and iodine are the best agents of the class. Dilatation of the cervical canal by sponge-tents is recommended by Baker Brown, Bomen, Nelaton and others. It not only has the effect to check hemorrhage, but materially modifies the nutrition of fibroid tumors, so as to check their growth and favor their extrusion. Should dilatation fail of itself to arrest hemorrhage, it prepares the way for the internal application of styptics, which may be carried up to the bleeding point with the probe and cotton. These tumors may be enucleated, when they present themselves within the uterus, either by the hands or ecraseur. Incisions are also made down upon the tumor and portions gouged out, with a view of aiding in their extrusion and destruction. Gastrotomy, for the removal of fibroid tumors, I referred to in a former report, and the experience of another year has given additional weight and pertinency to the opinion therein expressed.

REPORT

ON THE ANATOMICAL AND PHYSIOLOGICAL DIFFERENCES BETWEEN THE WHITE AND NEGRO RACES; THE MODIFICATION OF THEIR RESPECTIVE DISEASES AND DIFFERENCE IN TREATMENT RESULTING THEREFROM.

BY W. J. BURT, M. D., CHAIRMAN OF COMMITTEE.

At the session of this Association, held in Austin, Texas, April, 1875, I was appointed chairman of a committee to report on the above subject.

Ethnology is divided into two principal departments—the *scientific* and *historic*. Under the former is comprised everything connected with the natural history of man and the fundamental laws of living organisms; under the latter, every fact in civil history, which has any bearing upon the question of races, their moral or physical peculiarities, or interblending of the primary divisions of the human family.

The origin of the varieties of the human races is not connected by any natural or logical necessity with their original unity. The fact of their original unity may be infallibly certain, while the time and circumstances are enveloped in mystery; for no fact in the natural world is more inexplicable than the diversity of form and color in the human race. This report, however, only contemplates the characteristic differences existing between the negro and white races.

The question at once arises, have the negro and Caucasian descended from the same parents? I answer, that history has failed to prove to the contrary, but demonstrates clearly that man is everywhere the one identical species. Profane and sacred history trace up all the nations of the earth, like streams, to a common fountain and place—that fountain in the family of Noah. I am aware a few "so-called scientists" have spent much time in trying to refute this statement, and have developed much ingenuity and sophistry in their efforts. But when this question is brought down to its last analysis, the origin of the negro is from one of four sources: 1st. He is a *new creation* since the flood. 2nd. He has been *changed by climate and circumstances*. 3rd. He is *developed from lower organisms;* or 4th, he is the result of God's *direct interposition*. We believe he is not a new creation; for neither history nor tradition give any account of any creation since the flood; God had finished his work sixteen centuries before it. Has climate produced this change? Carefully peruse Egyptian, Chaldean, Assyrian and Grecian histories, and search remotest antiquity with her hieroglyphic symbols; and climate, with all her intrinsic forces, has never produced this fundamental change. Run back history for one, two, yes, for three thousand years, and there is not an authenticated case.

It is but reasonable to suppose, if climate had anything to do in changing the caucasian into a negro in remote antiquity, it would continue to make them, out of such abundant material and under such favorable influences. But history and observation fail to inform us of such changes now; climate and the sun's rays may have produced a diversity of color, but it is not possible to attribute the thick lips, projecting *os calcis* and conformation of the cranium and pelvis to these influences.

The recondite causes of race, culture, moral influence and climate, all combined, have utterly failed to develop the negro and give him that philosophic disquisition and seductive eloquence, which place the white man above all created intelligence. A little common sense, oozed out through the pores of history, puts a positive denial to the statement, that climate, with all its influences, has or can so change the anatomy and physical qualities of man.

Has the negro been *developed from lower organisms?* Messrs. Tyndall, Huxley & Co., by their development theory, say that he has been evolved and developed by some intrinsic or extrusive force to his present existence, from generic elements. But these gentlemen have failed to prove by any facts that species are convertible; and that nature has powers sufficiently strong to change the generic elements and forces of the ova of one order of animals into another. They have not been able to develop a monkey, much less a man, from this prolific protoplasm.

Then, if the negro is not a new creation since the flood, and has not been developed by climate, or evolved from protoplasm, it follows that there is but one solution to the question: that this change in color and physical conformation was *caused by God's direct interposition* in the family of Noah or Ham. It is no more unreasonable to believe that God interposed, contrary to natural laws, to produce this change, just after the flood, to carry out his purpose in giving a name and a people adapted to all portions of the earth, than that he caused a flood to cover the loftiest mountains fifteen cubits high, which destroyed all living beings, except those in the Ark. This was God's direct interposition, contrary to the laws of nature. It is clearly shown by mathematical computation that, if all the waters on

the earth and in it, and if all the vapour that surrounds it was condensed, the whole combined would not be enough water to produce such a flood. Yet the statement of Moses is accepted as true, and no man dares question it.

Whilst animals are of distinct species, in the different zoological provinces to which they belong, man, notwithstanding the diversity of races, constitutes but one species over the whole earth. In this respect, man appears an exception, as a being in this creation, of which he is, at the same time, the object and the end

It is, therefore, evident that the white and negro belong to the same species, but different races, with marked peculiarities. Furthermore, these distinctions have existed through the centuries since the flood, and what the negro was in his essential attributes, in the plains of Shinar, or in the valley of the Nile, he is, in rare perfection, to-day; and stands before us, in vivid form and unique figure, a faithful representative of his race. What, then, are these differences in the two races, as they now exist? For there is a just and geometrical arrangement, and proportion of the several parts of the body of the two races, to its several destinations, offices and functions.

The physical outlines of the negro differ from the white, in his wide, flat nose, flattened temples, protruding under jaw, wedge-shaped pelvis, flat, spongy feet, protruding *os calcis*, small Gastrocnemii, convex Tibia, longer arms, as compared with the legs, woolly hair, narrow waist, widened chest, pouting lips and black skin.

Dr. Samuel P. Logan, in his osteological admeasurements of the bones of the upper and lower extremities of the two races, gives an anatomical difference which cannot possibly be influenced by external agencies. The relative length of the bones of the extremities and the relation between their proximal and dis-

tal segments are characteristic. For example, the Humerus is, relatively to the Radius, nearly one inch longer, and the Femur is, relatively to the Tibia, nearly 1½ inches longer, in the white man than in the negro; or, to express it differently, in the white man, the Humerus is nearly four inches longer than the Radius, while in the negro it is less than three inches, and the Femur is nearly four inches longer than the Tibia in the white, and is only about 2½ inches longer in the negro. Another fact, developed by these measurements, is that in the white race the Fibula is longer than the Tibia, while in the negro it is shorter.

These instructive admeasurements give us this scientific fact: that the length of Tibia, compared to the length of the Femur and Tibia combined, averages about 43 per cent. in the white, and 46 per cent. in the negro; and that the length of the Radius, compared to the length of the Humerus and Radius combined, is about 40 per cent. in the white, and 43 per cent. in the black. So that, with two of the long bones of either extremity, we can pretty clearly designate the race to which they belong. This greater length of the bones of the distal segments is a condition approximative to that found in animals, next below man in the zoological scale. Dr. A. McDowell, during the recent war, made frequent *post mortem* examinations on the bodies of white and colored troops. He tells us that, while the chest measurements were full (up to the army requirements), he found the lungs always *lighter* and *smaller* than in the same sized chest of the white. But the most marked difference existed between the size of the liver and spleen; the liver was comparatively larger, while the spleen was much smaller, in the negro. May we not, on this fact, base the reason why the negro is less susceptible to malarious disease?

But the chief and most important anatomical distinction exists in the cranium and brain. The Caucasian skull is of an oval or

elliptical shape, with no excessive prominences, and of a symmetrical form; while the negro's skull is of an oblong, compressed form, flattened laterally, the temporal muscles rising high on the parietal bones; the cranial bones harder, thicker and stronger. The prognathous skull is remarkable for the large development of the parts connected with the organs of smell.

The nasal aperture is broad, allowing a larger surface for the distribution of the olfactory nerves; hence their sense of smell is more acute. Dr. S. G. Morton has examined critically over six hundred crania of the two races, and has probably the largest collection in the world. He speaks, therefore, authoritatively. He says: "The condyloid processes of the occipital bone, in the negro, are generally divided by a transverse groove into two distinct articular plates, and gives this as an evidence of their inferiority, and, by analogy, nearer relation to the lower animals. Another interesting fact is the position of the foramen magnum. In the negro, it is further back in the occipital bone, and with a less projection of the bone."

Dr. Morton took great pains to ascertain the absolute and relative capacity of the crania of the two races and of the higher order of animals. He places the average capacity of the cranium of the white man at 92 cubic inches; the average capacity of the negro at 83 cubic inches; the highe rorder of orang-outang and chimpanzee at from 16 to 24 cubic inches.

This difference in the cranial capacity of the two races amounts to 9 cubic inches, while the difference between the negro and highest order of animals is the astonishing amount of 59 cubic inches; which fact should forever put at rest the question of the near relationship of the negro and orang-outang.

If a line be drawn from the articulating surfaces of the occipital condyles, along the floor of the nostrils, and be intersected by another line touching the most prominent parts of the fore-

head and superior maxillary bone, this intersected angle is called the facial angle. This facial angle is said to be the typical expression or exponent of the relative strength of the physical and mental factors.

Taking this as true, we learn that the facial angle in the Caucasian is about eight degrees larger than in the negro, and, as a consequent fact, the brain of the negro is about one-eighth less in size, weight and superficial feet. From these data we draw three important deductions:

1st. That the size and weight of the brain will be found to increase with the angle of the face to the axis of the body.

2nd. The facial angle increases in proportion to the expansion of the cranium, with a diminution of the facial bones.

3rd. The mental manifestation and power have a direct relation to the angle above indicated.

Without noticing other anatomical peculiarities, we close this part of our subject by stating that the great fault of human philosophy is its *haste* to unravel and explain, without waiting for the plodding searches of science; so that the immense extent of our ignorance, compared with that of our knowledge, has been only the more profoundly forced upon us, as discovery has advanced. The negro has little elasticity of temperament, he lacks nervous endurance and moral courage, and it is believed that he is more profoundly impressed by shock than any race on the earth; consequently he holds up badly under all surgical operations, and gives a fearful mortality to such diseases as require nervous endurance and fortitude. I will name but a few. The statistics of disease and deaths of the white and colored troops, during the recent war, compiled by Drs. Otis and Woodward, show 105 deaths per 1,000 of colored troops from disease; the death rate for the same time, of the white troops, was 55 per 1,000. In typhoid fever, 1 out of every 2 8–10 died of the white, and 1 out of

every 1 8–10 of the colored. In consumption, 1 of every 2½ cases died among the whites, and 12 of 13 died among the colored; and, in pneumonia, 1 out of 5 among the whites, and 1 in 3 of the colored. This want of vital power and nervous endurance, I presume, results mainly from two causes, viz: The less lung capacity and smaller sized brain of the negro. The post-mortems of Dr. McDowell prove the first, and Dr. Morton demonstrates the latter; and although the liver is larger in the negro, and assists the lungs to decarbonize the blood, yet it is negative in its results, and powerless to give vital force and resistance. As a consequence of this lowered vital force and want of nervous energy, in practice, the negro cannot stand depletion, and must have stimulating and supporting treatment from the onset of disease.

The mortality from consumption in our Southern States among the negroes is extremely large. The fact that they live in a southern and temperate climate, and their habits of industry give them abundant air and exercise, should give a smaller per cent. of cases and a less mortality, if they were not more susceptible, and if they had the same vital resistance. The nature, constitution and pecularities of the negro adapt him to the duties and work of a tropical climate, and unfit him for the cold bleak winters of the North. He, bareheaded and naked, will sleep comfortably, as on a bed of roses, under a tropical sun that would kill a white man. In cold countries the negro trembles and withers in the blast, while the white man rejoices in the tempest and snow; but, in tropical regions, the former stretches forth his limbs, his eyes sparkle, and his whole person becomes alive with activity and force, while the latter files to the shade and faints from the heat. This nature also enables the negro to better resist the diseases and injurious influences endemic to hot climates; while the white man hardly dares remain, over night, on the marshes and rice plantations along our southern coast, the negro lives, works and sleeps with impunity.

The negro is peculiarly exempt from yellow and malarial fevers; his constitution is but little susceptible to the poisons that generate them. In a practice of twelve years, in a locality where malarial diseases prevailed, and where two-thirds of the laboring class were negroes, and where I witnessed twenty cases of hemorrhagic malarial fever, and knew of at least as many others, no case occurred in the negro, and he was, in a measure, exempt from the milder forms of malarious disease.

I close this report, already too long, with the statement that I have only mentioned some of the prominent differences between the Caucasian and Negro races.

CONTRIBUTION

TO REPORT ON CLIMATOLOGY AND EPIDEMICS.

BY J. R. TAYLOR, M. D., MEMBER OF COMMITTEE.

Having had no opportunity of communicating with other members of the committee, my report, necessarily, will be very short. Kosse, the point from which these observations were taken, is situated near the center of the State, on the Houston and Texas Central Railroad, in Limestone county.

Since our last meeting, we have passed through a remarkable year, as regards the climate of our State. In April alone, the rain fall was very great, and the month was characterized by brisk, variable and shifting winds; with a mean temperature, during the month of 65°. On 25th of said month, the thermometer stood at 58°, near the middle of the day. Northers were frequent during the entire spring, with wet, cloudy weather, which continued through May, with only a slight elevation of temperature. These cool northers continued, even into June, which is very unusual, although the State is noted for its climatic changes. At the close of the first third of this month, however, the weather, as a rule, became clear and beautiful.

During the period we have now passed over, catarrhal affections were quite common, with some considerable amount of trouble about the bowels, often amounting to dysentery. There was very little pneumonia or typhoid fever, and the country was remarkably exempt from malarial diseases.

Early in July, with a soil saturated with moisture, a drouth set in, and continued, with but little abatement, throughout August. The nights usually were cool, the early morning temperature often indicating from 63° to 68°. Still, during these changes, and apparently favorable conditions for the production of climatic diseases, our country remained healthy.

During September 17th, especially, and for a period of forty-eight hours, the terrible cyclone swept through Limestone county. The wind being cool and bracing, no evil consequences followed in its wake, as regards health.

During the winter, there was an occasional case of typhoid fever or pneumonia, but no epidemic of any kind has visited this section of country during the year. And although the seasons, very generally, have been altogether out of *season*, with a temperature remarkably and continuously elevated during the winter months, yet we have had a year signally blessed with good health.

The month of March, as usual, was very windy and disagreeable. Early in the month, the wind approached a hurricane, with considerable rain, but little damage of any kind resulted from it. On the night of 19th of this month, we had a most cutting norther and *freeze;* the month generally giving evidence of a backward spring. An unusual amount of rain has fallen during the month.

No new diseases have appeared during the year.

I would, respectfully, call the attention of the Association to the cotton plant, as influencing, very materially, in some way, *that poison,* that *materies morbi,* that constitutes the great scourge of this Southern country. I have long since been convinced, that those farmers planting cotton on the south side of their residences have far more sickness, during the summer mouths, than those adopting the opposite plan. The cotton stalk, growing very rapidly, soon shades the ground, so as almost entirely to shut out

the rays of the sun, thereby very greatly increasing the amount of vegetable decomposition. Malaria, supposed to result therefrom, is borne to the houses, by almost a continuous south breeze, during the summer. But we are not sure, by any means, that this is the only deleterious influence exerted by the cotton plant, so extensively cultivated in the South. Some eighteen or twenty months ago, the theory was sprung that malaria was exclusively of a vegetable origin—an *oleo-resin*, washed from plants and carried into pools of water, as well as being absorbed by the atmosphere. In Dr. Harrison's analysis of the cotton plant, we find it contains a large per cent. of *oleo-resin*, and, consequently, may it not intrinsically have something to do with the production of malaria?

CONTRIBUTION

TO REPORT ON CLIMATOLOGY AND EPIDEMICS.

BY J. T. NORRIS, M. D., OF BRENHAM, TEXAS.

CLIMATOLOGY.

As a rule, this part of our State is subject to sudden and extreme vicissitudes of climate, especially during the winter and spring. It is during these seasons, too, that the greatest amount of rain falls; followed ordinarily by protracted dry weather and average temperature of, say, 90°. These dry spells or drougths set in frequently in the early part of May and continue two or three months, rendering our summers hot and oppressive, and often destructive to the agricultural interest of the farmer. South winds prevail during our summer months, rendering our nights comfortable and pleasant, thus compensating for the heat and oppression of the day. At all other seasons of the year, our winds are exceedingly variable; coming from every point of the compass, except the west. Although western winds, with us, are rare, yet the most violent storms, that I have ever witnessed in this locality, have been from this direction.

I propose, however, a report, as to the climate of the past twelve months, which has been remarkable, I think, in several respects. During this period, there have been but few violent and extreme changes of temperature. The atmosphere, for the most part, has been free of humidity, mild and temperate. Although a greater amount of rain fell than is usual, yet it fell at

different and frequent periods, followed, ordinarily, by clear weather and bright sunshine. The seasons, throughout the year, were happily adapted to the healthy growth and perfect maturity of vegetation generally. Had it not been for the destructive storm which swept over our country on the 19th of September last, the industry of our planters would have been rewarded by a most extraordinary yield. The winter, which is just passed, rivaled the other seasons of the year in point of mildness and uniformity of temperature. Upon three or four occasions, we observed a very thin film of ice, and, perhaps, as many frosts appeared, but they were light and not destructive to hardy vegetation. Many gardens were green and flourishing in mid-winter.

The appended thermometric table represents, for the year, the reports made by Doctor Wood, a druggist of this city, to the signal service department at Washington. It is proper to state that these observations were taken at 9 o'clock A. M., and at 3 and 9 o'clock P. M. The lowest temperature therefore is not given, as it occurred necessarily in the earlier part of the day. It is proper to state, too, that the thermometer used hangs near the centre of the first room of a two story brick building. The building fronts north, and during the hot days of summer, a brisk breeze passes through the house, from south to north, rendering the temperature, perhaps, a degree less than it would be in many other situations. During the unpleasant days of winter, the north doors of this room are kept closed, except when opened temporarily to pass in and out of the drug store, which would also render this table a little incorrect as regards the extreme lowest temperature. I have frequently observed a difference of two, or even three, degrees between this thermometer and one which hangs immediately outside of the front door. This table represents very correctly the amount of rain fall and the fact (so unusual in this climate), that it rained more or

less every month in the year. The largest quantity, which fell at any one time, was on and just before the 19th of September; at the time that our coast country suffered so fearfully from the cyclone.

EPIDEMICS.

Physicians, with whom I have conversed (many of them old practitioners in different parts of the county) concur in the opinion that, for the past two years, unprecedented good health has prevailed. This seems to be especially true with regard to the last twelve months. Intermittent and remittent fevers prevailed to some extent during the summer and fall, but they were unattended by congestion or other complications and yielded readily to ordinary treatment. That condition of the system known as "malarial cachexia," sometimes so common among us, was rarely seen during the period of which we are writing.

Other idiopathic fevers, typhoid, typhus, hemorrhagic malarial, etc., were so rare, that I do not remember to have heard of a case.

Gastro-intestinal diseases had only a sporadic existence.

Diarrhea, cholera morbus and dysentery were occasionally met with during the fall and early winter; but, as a rule, there was little malignancy and but few cases resulted in death.

Cholera infantum and chronic enteritis in children, or the *wasting disease*, as it is sometimes called, have not prevailed to that extent common to this locality.

The respiratory organs have been affected more by catarrhs than any other diseased condition. The old and young alike have suffered more or less, throughout the winter, with bad colds, which, in some instances, have resulted in bronchitis, and less frequently in pneumonia. I cannot call to mind, at the present time, any fatal case from these diseases. Within the last two months, there has been quite a prevalence of tonsilitis and

pharyngeal inflammations, followed in some instances by ulcerations; and we have also heard of a few cases of diphtheria and eruptive fevers.

During the months of January and February of last year, our city and neighborhood were visited by a slight epidemic of small pox. The first few cases were exceedingly mild and presented so few characteristics of this loathsome disease, that it was a question for some time with me, what to pronounce it. After three or four cases, however, it assumed well marked features, and presented us cases in the most malignant form. This disease lingered among us for two months or more. There were eighteen or twenty cases in all (several of them varioloid), and, if I remember correctly, seven deaths occurred. This is the second visitation of small pox to this community during the past thirty years; the other having occured in the winter of 1863, at which time there were eight or ten cases.

During the months of January and February, of the present year, an eruptive fever prevailed, which presented such irregular features that it was impossible to name it, as an epidemic. For a time no two cases were alike, differing in their mode of accession, character of eruption, fever, etc. One physician reported, for instance, a case of variola, another a case of measles, and yet another a case of scarlet fever. The truth is, it seemed, in some cases, to be a hybrid form of eruption, and we doubtless had, at the same time too, mild cases of scarlet fever and measles. Within the last three or four weeks, this exanthematous epidemic has culminated in well marked, undoubted measles, which now prevails in our midst.

I should not omit to mention the prevalence of whooping cough in our city. Whether it exists through the country or not, I do not know.

TABLE OF TEMPERATURE, ETC., FOR THE YEAR BEGINNING MAY 1ST, 1875:

1875	Avg. Temp.	Wind.	d'ys	Weather.	d'ys	H. Temp.	L. Temp.	Rain. inchs.
		S.	20	Clear	21			
May	76¾°	N. V.	11	Cloudy	10	81°	65½°	3 2–10
		S.	25	Clear	18			
June	81½	Var.	5	Cloudy	12	86	71	9–10
		S.	22	Clear	11			
July	83¼	Var.	9	Cloudy	20	85½	79	2–10
		S.	17	Clear	17			
Aug.	83½	Var.	14	Cloudy	14	87	76½	2 1–10
		S.	16	Clear	22			
Sep.	76	Var.	14	Cloudy	8	85¾	63	7 7–10
		S.	13	Clear	27			
Oct.	69¾	Var.	18	Cloudy	4	78	59	1 6–10
		S.	11	Clear	11			
Nov.	61½	Var.	19	Cloudy	19	76	41	3 4–10
		S.	16	Clear	20			
Dec.	61	Var.	15	Cloudy	11	72	48	8
1876								
		S.	13	Clear	16			
Jan.	59½	Var.	18	Cloudy	13	71	46	3 5–10
		S.	10	Clear	17			
Feb.	60	Var.	18	Cloudy	11	71½	42	5–10
		S.	10	Clear	18			
Mar.	61	N. Var.	21	Cloudy	13	78	29	5 9–10

CONTRIBUTION

TO REPORT ON INDIGENOUS MEDICAL RESOURCES.

BY A. R. KILPATRICK, M. D.

Drs. Seeds and others, Committee, etc.:

GENTLEMEN—Although not applied to personally for information in your department, yet feeling a desire to contribute my mite to the knowledge of the medical resources of our State, I venture to lay before you the following items, briefly setting forth the medical virtues of certain plants and shrubs, viz:

Silphium Laciniatum, or Rosin Weed; *Xanthium Strumarium*, or Cockle-bur; *Malvus Drummondii*, or Spanish apple; *Alnus Rubrum*, or Tag Alder; and *Helleborus Fœtidus*, or Bear's foot.

First. *Silphium Laciniatum*, or Rosin weed, grows wild in the Brazos river swamp, and, I presume, in other parts of Texas. It is an annual weed with a stem from four to six feet high; deeply sulcated longitudinally, making it look as if octagonal. Leaves alternate; lanceolate; petiolate; serrate, five or six inches long and nearly two inches wide. Flowers bluish white; fasciculate. The roots are fibrous, numerously branching; the largest about a half inch in diameter and twelve inches long. The medicinal properties are only in the roots, which are strong and tough; they cannot be ground in a mill, as they are full of a gummy terebinthine substance which emits a strong odor when cut or broken; imparting a sticky feeling to the fingers, when handled. The Alcoholic Tincture is the best form of administering it, as

it imparts its virtues readily to that menstruum. No particular formula need be observed in preparing it. The roots are cut fine with any convenient tool and placed in alcohol, and after a few days it is ready for use. The customary dose is from a half drachm to two drachms, diluted in rain water if convenient. On mixing it in water, the mixture instantly becomes turbid, similar to what takes place on mixing tincture of camphor, or tincture of guaiacum and water, presenting a thick, milky appearance. The taste is very much like that of spirits of turpentine with the addition of the juice of some sappy, green weed. The dose can be repeated every four or six hours, if necessary. After taking it, there is a gummy feeling on the teeth, but it soon leaves. In a short time after taking a dose, the urine imparts the odor of violets, which characterizes the use of turpentine.

Uses. I can recommend the use of the tincture of Rosin weed in *all* derangements of the *kidneys*, no matter what they may be, as it has a correcting and curative influence on the whole urinary apparatus. It is very beneficial in rheumatism, probably through its effects on the kidneys. In lumbago and sciatica, pains in the back, weakness in the back, and neuralgia, it has a highly beneficial effect. I confidently recommend it to the profession, not only in Texas, but everywhere.

Second. *Xanthium Strumarium*, or Cockle-bur. This plant, or weed, is so well known to every body that any description of it is entirely unnecessary. But I must express my objection to the term *Xanthium*, which means *yellow*, as it is not descriptive of the weed, it being intensely *green* in all its parts, in the growing state.

Uses. It is a prompt and speedy *vesicant*, and if the leaves are rubbed a little on the skin, there follows a very unpleasant burning sensation, with redness. In order to obtain its vesicant effect, take enough of the leaves, or of the whole plant, mash into

a pulp and apply to whatever part you desire to vesicate, and in a short time a good blister will be made.

As an antidote for *snake bite*, you may apply the juice of the plant to the bite, and also drink a tea made of the leaves by boiling them in water. Bites of spiders, tarantulas and centipedes, or any insect, are rendered innocuous by its use in the same way. As a *styptic* to fresh cuts, it is as good as many other of our remedies. To arrest hemorrhage from the uterus, lungs or stomach, the expressed juice applied topically, or drank, acts well and promptly, unless there is a decided hemorrhagic diathesis in the patient. This fact has been announced before this Association on a former occasion, and I have tested it by careful trial.

In all affections of the *kidneys*, or *bladder*; in dysury, strangury, scalding urine, bearing down, and painful micturition, or where there is phosphatic, or other urinary deposit, they are *all* amenable to its beneficial influence. Take a handful of the leaves, green or cured, and put them in a quart of boiling water, and when a decoction is prepared, drink a half cupful, or more, every half hour or hour, until relieved. Generally not more than three draughts are required. I will suggest further, that a tincture of the leaves may be used with the same happy results. In order to secure its full power, the tincture had best be made from the green leaves.

Third. *Malvus Drummondii*, or Spanish apple. Some call it Hibiscus Drummondii, but it is familiarly known to laymen as Spanish apple, and its many excellent properties are known all over many parts of Texas. It belongs to the *Mallow family* of plants, along with the cotton and okra plants and many others. This plant is an annual, found growing almost any where in this part of Texas, and its usefulnss, together with the beauty of the plant and flowers, render it a favorite in all flower gardens in the country. It has a small, slender stem, shooting up four and five

feet high in rich ground and where it is supported by other growths; of a pale green color; stem and lower surface of the leaves tomentose, or fuzzy; leaves broadly cordate, two to two and a half inches long, and of nearly the same breadth. Flowers scarlet red; column very slender, a little declined, stigmas hairy. Fruit red, subglobose, obtuse; composed of five closely united carpels. The root is large and fleshy like those of the chenopodium or the carrot. The root is the part used.

Uses. It is a most excellent demulcent. A few pieces of the fresh root put in a pitcher of water soon forms, a thick mucillaginous compound, which is much better than *ulmus fulva*, or *gum arabic* as a soothing drink for sick people.

The roots pounded into a pulp are used for poultices to boils, ulcers, swollen mammary, or other glands; piles, burns, blisters, bruises, or whenever a cooling, soothing dressing is required. As a drink, when cooled with ice, nothing is equal to it in fevers and irritability of the stomach. Where it can be procured, there is no need of trying to get any thing better to use in its stead.

Fourth. I will take the liberty of saying that the *Tag Alder*, *Alnus Rubrum*, a bush, or shrub, which grows plentifully near streams and ponds in some parts of Texas, is one of the best alteratives in the treatment of cutaneous diseases, such as tetter, eczema, tinea capitis, etc., that I have tried in a long course of practice. All that is required is to procure the tags, or *aments*, where they are abundant and place them in cold water in a jug, or pitcher, and use it as a constant drink. In absence of the *tags*, take a few of the switches, or limbs, cut them up into short bits, put them in water in the same way, and drink it *ad libitum*. I have cured the most aggravating and troublesome cases with this draught, when other remedies had failed. I used it during the war in the treatment of those cases where impure vaccine virus had produced painful and dangerous ulcers, and failed in no case.

I would urge it upon the profession to use the *alder* in all such cases.

Fifth. *Helleborus Fœtidus*, or Bear-foot; so-called from the resemblance the leaf has to a bear's foot. The root is the part used in medicine; it is large and fleshy like a potato. The virtues of the root are obtained by watery extract and by alcohol. Boil the root thoroughly and mix it with lard and use as a salve to tumours and enlarged glands. A watery extract may be procured by boiling the roots, and compounded the same way. A simple tincture with alcohol and mixed with camphor, or used singly to swollen, painful tumors, and mammary glands, produces a soothing and discutient effect.

Gentlemen—The report made by the committee at the last meeting in Austin (1875) was rather meager, and the excuse for it was, *no data* could be obtained. If any circulars, asking for help, were circulated by the committee, I saw none. If this means was not resorted to, it was an oversight, and no doubt proper measures will be adopted hereafter. No circular for 1875–6 has reached me, yet I thought I ought to write something to help you. If my trifling contribution is accepted, I shall be pleased, and feel complimented by your acceptance.

CASES REPORTED

BY T. J. HEARD, M. D.

DIPHTHERIA.

I herewith submit a few cases, which may be of some interest to the profession of Texas.

CASE 1ST. Called January 31st, 1876, to prescribe for a girl seven years of age, nervo-sanquine temperament; general health good, had a catarrhal affection, but not much fever. January 19th, saw her first. Pulse 120, full, rather gaseous. Temperature about 102°, face flushed, rather tumid. Great pharyngeal distress, cough bad, suppressed or obstructed articulation, and deglutition painful. No thirst complained of, bowels confined, fauces and glottis dark red and very tumid.

℞. Olei ricini, ʒii; Olei terebinth., gtt. v; Tinct. opii camph. gtt. v; Glycerine ℥ij. M. S. Take at once. For condition of throat, use camphorated oil to sub-maxillary glands, which were inflamed and swollen, and apply cotton as taken fresh from the bale over the part rubbed with oil. ℞. Quiniæ sulph., Potassæ chloratis, aa., ʒss.; Acid hydrochloric gtt. xv; Aquæ ℥ij., M. S. Teaspoonful in a wine glass of water every fourth hour. Alternate this with the following, to be used freely with a large soft linen mop, and to breath the hot vapor of lime water every hour or two: Acid. salicylic., ʒss.; Potass. chlorat., Alumin. et potass. sulphat., aa., ʒj; Sodæ phosphatis ʒss.; Aquæ q.s. ad ℥vj. M. S. Use every hour or two with a large soft mop to fauces, and ten drops to be drank each time the throat is mopped.

January 20th. Patient better in every respect. Slight pel-

licular exudation on tonsils. Takes food better. Inflammatory engorgement reduced. This plan was faithfully kept up, only remedies were used at longer intervals, until the patient was discharged on the 25th, with injunctions to feed well, and to guard against exposure.

CASE 2ND. February 26th. Saw the brother of the above named patient. He was about six years of age, a feeble child; highly nervous, somewhat choreaic. On the 25th was indisposed, slight fever, and had some digestive disturbance for which he took castor oil. When I first saw him he had some fever. Pulse 110. Temperature 101°. Tongue not foul, tonsils only slightly swollen. The mother remarked that there were occasional attacks of difficult respiration, but on as careful an examination as I could make, I found no evidence of obstruction to his breathing. Prescribed about the same treatment I ordered for his sister one month before, with the addition that a teaspoonful of powdered alum should be given, should another attack of difficult respiration occur.—27th. Condition of the throat about as yesterday. No dyspnœa. Had taken medicine well and regularly, also food. Although the boy was active, would jump up and out of bed, and though there was seemingly no obstruction to respiration, it was apparent the breathing capacity was diminished. The mother told me she had given the alum two or three times during the past night, and that he raised considerable quantities of tough mucus. As the fever had declined somewhat, I allowed him in addition egg-nog. 5 P. M., about as when seen this A. M., but on examining the pharynx carefully, I could see some few points of diphtheritic exudation far back in the fauces, peering up from the glottis. Ordered the same treatment with this addition, that the inhalations of lime-water should be used oftener than heretofore.—28th, 9 A. M. Weaker and the diptheritic exudation more extended upwards. Took food

and medicine well. Had to take two or three doses of the alum during the night, which, for the time, always relieved him. 5 P.M., pulse 130 and weak. Respiratory capacity diminished, but no stridor. Took food. In addition to the above, ordered: ℞. Acid. carbolic. cryst. gr. viij, Aquæ ℥viij. M: S. One oz. of this to be used with atomizer every third hour through a funnel. The effect was good. Passed the night quietly and seemingly comfortably, took medicine as usual, and seemed on the way to recovery, when on the 29th, at about 5 A. M., he threw up a large quantity of greenish cheesy matter from the air-passages, fell back, and died without a groan or struggle.

CASE 3RD. Son of Mr. W., aged about eight months. Was called on December 3rd. On examination I found but little more than catarrh, associated with some digestive disturbance, to some extent consequent on dentition. After observing it for six days, it was evident there was something at fault in his condition, which had not attracted my attention. On more careful examination one nostril was found occluded, the fauces were red but not swollen much. The cervical and sub-maxillary glands were a good deal engorged, and just below and behind the parotid, on the same side of the obstructed nostril, there was considerable tumefaction. The child, up to this time, had received a good deal of treatment, which it is not necessary to make mention of, as this related simply to little disturbances, consequent on catarrh, dentition, etc. I now felt confident I had diphtheria of the nostril to contend with. After a variety of treatment, such as quinine, chlorate potassa and such like, and after seeing my remedies prove worse than useless, I fell back on simply soothing oleaginous, and raw cotton applications to the neck, and pepsin with lactic acid, and as much good food as he could digest, with small quantities of whisky toddy as he seemed to require it. Under this plan, after a few days, there was some considerable im-

provement. But the most important point in the case, I have not made mention of, to wit: The means used for the nostril. ℞. Acid. carbolic. cryst. gr. viij; Aquæ ℥viij. M. S. A small syringe full to be thrown up the nostril every hour or two, and as a matter of course, the baby swallowed more or less each time the remedy was used. About the 28th, I made a free cut into the large collection on the side of the obstructed nostril, from which a large quantity of pus was discharged. The boy is now well, perhaps, but few more so than he in this town. Large membranous shreds were drawn from the nostrils several times during the day, for a week or more.

CASE 4TH. February 26th, was called to daughter of Mr. M., eight years of age—on 28th st., between E. and F. General condition has been good of late, no fever, very little soreness of throat, no swelling nor redness, but white diphtheritic exudation on both tonsils and arches of the soft palate. Ordered the salicylic acid mixture to be used every hour with soft mop. No medicine. Good diet. 7th. Exudation gone. Patient up and well, only slight redness remaining.

CASE 5TH. This case presents one point of interest, hence I report it. March 23rd, called to see child of Mr. ——, on Av. D., between 9th and 10th sts. Baby, aged six months, nervo-sanguine temperament; habit very full; has been uniformly healthy. During previous day feverish, with slight gastric disturbances, for which castor oil had been given. On seeing the baby I had but little hope of saving it. The fever was most intense, the head and face flushed, seemingly, to the last degree. The moans and jactitations were constant, hands in constant motion, convulsively clawing at its head, whilst the head was as constantly rolled from side to side. The parents had despaired of their child, having lost two under one year of age, after not more than one day's sickness; and this now being

their only child, their distress can better be imagined than described. It was one o'clock at night; very dark and rainy, and such means as might have been used in the case, under different circumstances, could hardly be obtained in time to save the life of the patient. Hence, I ordered hot half baths every hour, and the bath to be as hot as the child, seemingly, could bear, and to be continued until the patient seemed to be composed, and that cloths wrung out of hot water should be kept constantly applied to the head, and for it to take one teaspoonful of the following mixture every hour until relieved: ℞. Bromidi sodii; Pulv. gum acaciæ, aa. ʒij; Ext. hyoscyami fluidi (Tilden's), gtt. vj; Acetat. potassæ ʒj; Syrupi aurantii cort., ʒiv; Aquæ menth. pip. q.s. ad ℥ij; M. S. One teaspoonful every hour until composed. 8:30, A. M., child had taken five doses, was better after the third dose, and had been sleeping for one hour. Fever much reduced. Flush of face not so great, but still nervous, as evidenced by little starts, though sleeping, when any noise was made. Give no more medicine if not required, but use bath and the mixture should any of the bad symptoms recur. 6 P. M. Hardly any fever, flush has passed off in toto. One dose of the bromide mixture had been given. Child was calm but rather haggard. Is only to take the bromide mixture in case of return of fever. ℞. Podophylin, gr. ss.; Magnesiæ calc., gr. xxx; Ext. rhei fluidi, gtt. xxx; Syr. aurantii cort., ʒiv; Aquæ menth. pip. q.s. ad ℥ij. M. S. One teaspoonful every third hour until purged. The child is now hearty. In advance, I remarked that this case presents one point of interest, and I think it does, simply in this. It shows what can be done by such a combination in such cases, and that the bromides and henbane can be safely used in such extreme cases wherein death is imminent as the result of vaso-motor paresis. The four cases of diphtheria re-

ported above have each some pecularity, hence my reasons for reporting them. The fourth, which was aborted, if I may be permitted the expression in this connection, was as genuine a case of the affection as I ever saw, aside from the fact that it was local, and that there was no constitutional contamination up to the time when the treatment was instituted. It is not my wish to trespass longer on the time of this Association. Hence I submit the cases for what they are worth, without further comment.

DISLOCATIONS OF THE HUMERUS AT THE SHOULDER JOINT.

(SCAPULO-HUMERAL).

DUGAS' DIAGNOSTIC SIGNS. REPORT OF THREE CASES OF THE MEDIO-GLENOID, SUB-CLAVICULAR VARIETY, REDUCED BY A NEW METHOD AND PROCESS.

BY GREENSVILLE DOWELL, M. D.

Scapulo-humeral dislocations are divided by recent writers into two varieties.

1. In front of middle of glenoid cavity.
2. Behind the middle of glenoid cavity.

1
- I. Medio-glenoid.
  - 1. Extra-coracoid.
  - 2. Sub-coracoid.
  - 3. Intra-coracoid.
  - 4. Sub-clavicular.
- II. Sub-glenoid.
  - 1. Scapula.
  - 2. Costal.
- III. Super-glenoid.

2
- 1. Sub-acromion.
- 2. Sub-spinous.

Professor Gross divides them into three.

1. Axillary—into the axillary space.
2. Thoracic—on the chest.
3. Sub-spinous.

No doubt there are nine positions the head of the humerus can take in reference to the centre of the glenoid cavity.

ANTERIOR AND POSTERIOR.

Anterior.
- 1.—Outer side of coracoid process.
- 2.—Under coracoid process.
- 3.—Inside of coracoid process.
- 4.—Sub-clavicular.
- 5.—Costal—on the ribs.

Posterior.
1.—Sub-acromion—under acromion process.
2.—Sub-spinous—under the spine of scapula.
3.—Sub-scapularis—under the edge of scapula.

The division into anterior and posterior is important in reference to the position of the elbow-joint. In the *anterior* varieties the elbow lies outside of a straight line drawn from the centre of the glenoid cavity to the anterior superior spine of the ilium; and *vice versa*, when the head is in the posterior position, the elbow is in front, or on that line.

Fig. 1.

Fig. 1 represents the arm in its natural position, with the hand resting over the right shoulder, with the elbow touching the chest.

According to Dugas, this position *cannot* be obtained voluntarily by the patient, or forcibly by the surgeon, in any of the dislocations at the scapulo-humeral articulation, provided the body is kept straight and the shoulders level.

Fig. 2 (marked 5) shows the head of the humerus between the two heads of the biceps muscle, and resting against the clavicle, and posterior and superior to the coracoid process, and above its coraco-clavicular ligament. The arm is thrown back and pressed to the ribs, being the *medio-gleno subclavicular position.*

This dislocation is very difficult to reduce by any of the usual means, such as heel in axilla, knee in axilla, extension by bandages around arm and under and in arm pit, or by manipulations as shown in most of our text-books.

I have seen four cases of this dislocation that defied all the

usual means, three of which were reduced by the process shown in Fig. 3, (marked 6).

CASE 1.—An Irish sailor in City Hospital, Galveston, 1866; dislocation sub-clavicular extra-coracoid. I tried the heel in axilla, with powerful extension by assistants, until my foot bebame numb and I was forced to remove it. I then got the rolling pin out of the kitchen, and held this under the axilla while powerful extension was made; still failed.

Seeing the bone was held in its position by the two heads of the biceps, the pectoralis major, latissimus dorsi and teres major locking the head of the humerus between the coracoid process and the clavicle and on the coraco-clavicular ligament, I proposed to elevate it from its fixed position by a *porter bottle*, which would roll, and not be so fixed as the rolling pin. I procured the bottle and placed it in the position seen in Fig. 3, holding it by the neck with the left hand, and with the right making extension backward, outward, and downward. By so doing I raised the head out of its imbedded position. Then the latissimus dorsi, pectoralis major, and teres major assisted me in pulling it in position, the bottle rolling to let the head come down.

Fig. 2.

CASE 2.—While in Philadelphia, in 1872, I saw a case of this dislocation in Prof. G's clinic, and he tried all the usual means for its reduction and failed, but remarked, before he began, that all surgeons had failed in some of the dislocations, and if he failed he would not feel ashamed, as Dr. L. had failed on one man at the hospital. Dr. P., of Illinois, was present, a stout,

strong man. He tried to reduce it with two sheets, and also failed.

I remarked to Prof. G. that I had seen a similar case, and reduced it at last with a porter bottle in the axilla, after failing with all other means, which he reported to his class, remarking he was too much exhausted to try it, and I was so feeble I could not.

CASE 3.—Emigrant, at Austin, Texas, January, 1873. Was called to see the case, by Drs. M. and L. of that city. They had tried all the usual means and had failed. I told them of the cases reported above, and that I would try the porter bottle again if they would put patient under chloroform, which was done, and without the least trouble I reduced it, as described in case 1, February 3d.

Fig. 3.

CASE 4.—White woman. Galveston, Texas, December, 1875. I was called to see this case by Professor R., and Demonstrator S., of the Texas Medical College and Hospital. They had tried all the usual means under chloroform, and had produced, on the hands and under the arms, abrasions, by the powerful extension they had made, but had failed. I made a clinic of this case, and reduced it in the presence of the class and Professors Rankin, Burroughs and Dr. Sunburg, without the least trouble. Professor Burroughs was a student at the time I reduced the first case, and assisted in its reduction.

All the other varieties of dislocation at the scapulo-humeral articulation are easy to reduce by any of the usual means, but I

have found the latter better than the heel and knee holding it while assistants make extension and counter-extension.

Before closing this article, I wish to say more about Dugas' pathognomonic sign of dislocations of the shoulder, as some cases are very hard to diagnose, such as contusions of the deltoid, fractures in the neck of humerus, and lacerations of long head of the biceps. In all these cases the arm can be brought into the position as seen in Fig. 1. This is impossible in all dislocations, but can be done in all fractures and lacerations or contusions.

CASES REPORTED

—BY—

W. H. PARK, M. D., MEMBER OF COMMITTEE ON SURGERY.

LITHOTOMY.

CASE 1.—James Barkeley, aged 13 years, was brought to me by his father, from Fort Worth, in November last. Mr. Barkeley stated that his boy had been troubled with symptoms of vesical calculus for several years; and that at times his suffering was very great; that he had been sounded by Dr. Roberts, of San Augustine county (but rather imperfectly, on account of the want of a suitable instrument) and that Dr. Roberts was satisfied of the existence of a stone. Knowing that Dr. R. was a surgeon of considerable reputation, I relied on his opinion, and did not sound him until the day appointed for the operation.

On the 25th of November, with the assistance of Drs. Shufford, Jones, Reid and Goodman, I proceeded to operate by the lateral method. The patient being thoroughly chloroformed, I introduced a sound and satisfied all present that a stone existed. We then introduced the staff, and Dr. Jones kindly took charge of it, holding it in the usual way, hooked firmly against the pubis and perfectly perpendicular, with the groove turned a little to the lelt. Having satisfied myself that the point of the staff had not slipped out of the bladder, I commenced the incision about one and a half inches in front of the anus, and carried it obliquely downward and outward, between the tuberosity and the anus; making a free division of the skin, and superficial fascia, and then pressed the point of the left index finger into the space between the accelerator urinæ and erector penis, coming in

contact with the triangular ligament and levator ani, I pressed them up against the staff, feeling the groove distinctly. I then carried the point of a common bistoury along the finger to the parts and punctured the membranous portion of the urethra, introduced the fingers and continued the incision through the cervix and prostate gland to the extent of about a half inch. Withdrawing the knife, I carried the finger into the bladder, and ordered the staff to be taken out. Finding the calculus pretty large and rough, I dilated the wound in the neck and prostate with my finger, and introduced the forceps. The stone was readily grasped and brought out without much difficulty. The hemorrhage was quite insignificant, not more than four ounces of blood being lost. Having cleansed the wound, washed out the bladder with warm water, and dried the parts, the patient was put to bed, and in a short time recovered from the influence of the chloroform, under which he had acted very kindly. Four or five hours after the operation, the patient complained of some pain in the wound; a dose of morphia was administered, and no further complaint was uttered. The urine flowed freely through the wound for six days, and on the eighth commenced passing through the urethra; there was not an unpleasant symptom at any time, and, at the end of three weeks, the patient was perfectly well, and has continued to improve in health and strength.

CASE 2.—Mr. Wm. Carr, aged 25 years, mail agent on the H. & G. N. R. R., came to me on the 15th of February, asking an operation for the relief of his bladder, which, he stated, had troubled him all his life—at least as long as he could remember. He had every symptom of vesical calculus, but had never been sounded. He was then suffering from a *fit of the stone*, which was unusually severe. Upon examination I found his system in bad condition, with considerable fever, and informed him that it would be highly imprudent to undertake an operation while

his system was so much deranged, and that it would be several weeks before I could get him in condition for the operation. In this I was correct, for he had irritative fever more than two weeks, despite all I could do. This attack left him quite weak, and it was not until about the 25th of March that he was in condition for so graev an operation. On that day, I sounded the bladder and found quite a large stone lying just above the pubes. I tried to move it from that locality but did not succeed, and gave it as my opinion that the stone was adherent or encysted. The sounding did not set up any irritation, and on the 29th, I performed the lateral operation, assisted by Drs. Jones, Goodman, Shufford, Conally, Rather and McCreary. The method of procedure was the same in every respect as in the first case, but was attended with *much* more difficulty. After cutting into the bladder, I found quite a small calculus (not larger than a large bullet) lying loose at the end of my finger: this I took out with a small pair of forceps; then introduced my finger and found a large stone above the pubes, exactly where I had found it on sounding a few days before. I soon ascertained that it was fast in that locality. I made every effort in my power to detach it with the finger, but failed. I then tried with the scoop but had no better success. After working a considerable time, my fingers became cramped, and I requested Dr. Jones to relieve me, hoping that he might detach it, but he could not. I again made an effert and, finally, by pressing above the pubes, brought it dowh so that I could grasp one end of the stone with the large forceps and crushed it, so that the nucleus (which was about the size of the finger's end) dropped out. This I caught with the forceps and brought away: also several large pieces, and a great many small ones. After getting the loose particles all out, I introduced the finger and found the part of the bladder, from which the stone was taken, encrusted. This I pealed off with the finger

nail, and, by repeated washings, succeeded at last in getting every particle away. I had the small stone on the table fifteen minutes after commencing the incision, but it took me at least two hours to remove the large one. As in the other case, the hemorrhage was very small. The parts were cleansed and dried, and the patient placed in bed I was unavoidably compelled to work with the bladder so long that I was very fearful that a high grade of inflammatory action would be the result; but to my great relief nothing of the kind has yet occurred, and this is the fifth day since the operation: in fact there has not been an untoward symptom. The urine has flowed profusely through the wound; there has been no pain and but little febrile excitement, and that occured within the first twenty-four hours. At present every indication points to perfect success.

The stone taken from the first patient was of the mulberry variety, but I have not submitted it to any test: that from the last, is of ammoniaco-magnesium phospate variety; the blow pipe gives imperfect fusion with ammoniacal odor, and particles of the stone dissolve in muriatic, and nitric acid.

I am well aware that Lithotomy is one of the oldest operations in surgery, and almost feel that I have consumed the time of this Associatson unnecessarily. Yet as one of the committee on surgery, I felt it my duty to contribute what I could to forward the interests of surgery in Texas. I have given the particulars of the operations, as performed by myself, for the benefit of those who have not yet operated for stone. You will notice that I take the advice of Ferguson, which is to make a free incision through the skin and supperficial fascia, and then use the finger in finding my way to the staff. Most authors recommend a good deal of cutting—more I think than is necessary. My experience teaches me that all can be done with the finger that is necessary, after making a free incision through the skin; there

is certainly less danger of hemorrhage. For, unless the puncture is made too high up, so as to wound the artery of the bulb, there is no danger whatever of cutting any artery, and no one who understands the anatomy of the parts will cut too high and wound that vessel. We all know that to wound the pudic artery or the artery of the bulb is a serious matter, and should be avoided if possible. In Ferguson's method there is no danger, and I heartily recommend it to those who may undertake the operation.

CASES REPORTED

—BY—

B. F. EADS, M. D., MEMBER OF COMMITTEE ON SURGERY.

I beg leave to submit the following, more on account of their statistical value, than for anything very remarkable or peculiar in their character:

CASE 1ST.—Amos N——, a white boy, nine years old, was brought to my office, February 20th, 1871, suffering severe pain, with continual micturition, and inability to retain his fæces. His father stated that he had been treated by other physicians in another State, for some kidney affection, but, all to no purpose. And that he had been suffering in a like manner ever since he was six months old. Evidently, it had been of long standing, as his mind was very much impaired at the time he applied to me for aid, and it afterward improved to a natural condition when relieved of the cause of his suffering. Suspecting calculus, from the history of the case, I introduced a steel sound, and had my suspicions verified by the well known click. The facts were made known to his father, and an operation agreed upon as the only means of relief. Consequently, February the 25th, was designated for the operation—allowing five days for preparatory treatment. Being ably assisted by a sufficient number of my medical friends, the operation was performed in the usual way (Cheselden's lateral method), with no difficulty attending it, except that of prolapsus ani. The wounding of the rectum was obviated by the retention of the finger within it, until the incisionto the neck of the bladder had been

completed. This prolapsus was brought on by the straining efforts of the patient during the operation—the sphincter ani having been previously in a paralyzed condition. When the stone was extracted, it was found to be an uric, or lithic acid calculus, weighing some three hundred grs., or more. Smooth and solid on one side, rough and porous on the other. The operation concluded, the patient was placed in bed and anti-lithics given to correct the diathesis. The urine continued to flow through the wound for some five or six days; at the end of which time, it assumed its natural channel. The patient experienced no further inconvenience after this, except an inability to retain his urine when accumulated in any quantity in the bladder. This condition of things lasted but a short time, and finally yielded as soon as tone and contractility had been given to the muscles about the neck of the bladder. The patient was discharged cured, the 17th of March following—twenty-five days from the time of the operation.

TRACHEOTOMY.

CASE 2ND.—In the year 1872 there appeared in this county an epidemic form of diptheritic croup. On October the 4th, of that year, I was called some twelve miles distant, by a friend (a practicing physician) to see his little son, aged two years and seven days, of fair complexion, light hair, and blue eyes, who had been suffering with this terrible malady, so his father informed me, for six days. As the indications for surgical interference were not very urgent, and the treatment that the father was pursuing, was such as to give hopes of relief, (if, indeed, relief could be obtained by therapeutic agents), we thought it best to persevere in the treatment yet a while longer. On the sixth of the same month, however, I, accompanied by Dr. Pope, was recalled to the little sufferer, with request from

the father to come prepared for tracheotomy, as his child was suffocating. On our arrival at the house, we found the child giving every indication of early dissolution. Countenance extremely anxious, lips livid, complexion of a death-like pallor and great dyspnœa. Seeing there was no time to wait, the child was taken from his mother's lap, placed on a table near by, pillows put under his shoulders, head thrown back, and assisted by Dr. Pope and a gentleman present, I opened the trachea, commencing at the cricoid cartilage and ending near the sternum.

There being an accumulation of blood and frothy mucus in the trachea, after the incision, it was removed; and Obre's double tracheotomy tube inserted, and the lungs fully inflated. Almost instantly, an entire change was effected in his condition. The death-like pallor and livid lips gave way to a natural color, and the eyes sparkled with gratitude for the relief that had been given him. About the 11th day from the time of the operation, the tube was removed, the wound closing shortly afterward entirely. And the little boy is now a living monument of an operation, which, the great Trousseau has said—in his memoirs on diphtheria—"is in itself, an operation more delicate than difficult." It is however, more difficult than one would suppose; who, for the first time, has attempted it; especially on children, whose tracheas are small and deeply seated, and covered with a quantity of loose granular fat, with many veins turgid with blood from asphyxia. Veinous hæmorrhage is sometimes so profuse, that it is with the greatest difficulty the trachea can be found; and after it is, there is great trouble in dividing the cartilaginous rings, in consequence of the motion to and fro of the air-tube, made by the efforts of nature to fill the lungs with fresh air; to say nothing of the struggling efforts of the patients, to free themselves from the surgeon's knife; particularly, when

chloroform cannot be used with safety, as is usually the case under these circumstances.

CASE 3RD.—The following year, 1873, in September, Robert E. B——, a bright, intelligent little boy, (white) age three years and three months, was taken sick with diphtheria, and treated by the family physician, after the usual manner, for some eight or ten days; when the symptoms became so alarming, it was evident the only hope left him was in tracheotomy. Accordingly, during a paroxysm of suffocation, in the absence of the physician, I was called in haste at 2½ o'clock P. M. On my arrival at the house, which was but a block or two from my office, I found the child in a complete state of asphyxia; gasping for breath, and leaning forward in the nurse's arms, to every one, imploring aid. Seeing his situation, and a demand for immediate action, I obtained the consent of the parents, and assisted by some two or three ladies alone, who were present, commenced the operation. Before completing it, however, Dr. Pope came to my relief, and aided me greatly in the insertion of the tube. After which, the little patient became comparatively comfortable—breathing easily, and with a return of a more natural color.

That night, however, towards midnight, as I was told by the family physician, the breathing began to grow worse, convulsive twitching of the thumb and fingers came on, and finally, general convulsions, with death, which occured at 2½ oclock A. M., making twelve hours from the time of the operation. The most probable cause of death in this instance was the extension of the diphtheritic membrane in the bronchial tubes, diminishing the supply of oxygen and thus poisoning the blood with carbonic acid in spite of the operation.

CASE 4th.—Occurred in a little girl (white) five years old, who had been sick for several days, with the same affection, diphtheritic croup; growing suddenly worse, I was called in con-

sultation by the attending physician. And, although finding the patient in a manner moribund, with almost an entire exclusion of air to the lungs, attempted the operation; but, before it could be completed—before the trachea was sufficiently opened for the insertion of the tube—life was extinct.

REMARKS.—It will be seen from a summary of the these cases of Tracheotomy, that I have attempted to report, that they were performed under the most unfavorable circumstances. At a time really, when one could not reasonably entertain more than a slim hope of success. In the first case, of the child two years of age, it was a complete success—saving the patient from an untimely grave. In the second, of the child three years old, a partial success—prolonging life several hours, and thus giving nature and the physician time to combat the disease. The third case was incomplete; although, reflecting not at all upon the propriety of such operations under simular circumstances. Had it have been performed earlier the result might have been different.

By referring to the work on diseases of children, by Dr. Chas. West, of London, it will be seen that the first successful operation of Tracheotomy reported, was by M. Bretonneau, of Tours, France, in 1825. Some eight years afterward, a successful case was reported by M. Toursseau. And, subsequently, up to 1850, there had been performed, throughout France, three hundred operations of the kind, with about one-fourth recovery. Dr. Charles West, however, asserts, that his success in England was not so good. That out of sixteen cases operated on by him, there was but one single recovery. He, however, advocates strenuously, the operation in those extreme cases; if for no other purpose, "than the euthanasia which it secures."

CHRONIC CYSTITIS;

TREATED BY INJECTIONS OF NITRATE OF SILVER.

BY DRS. MURPH AND LONG, LINNFLATT, TEXAS.

In bringing this case before the State Medical Association, we do not claim the treatment as being original with us, or new to the profession; but, we introduce it simply on account of the great confidence we have in such treatment.

We were called on February the 14th, 1875, to see Mrs. P.——, aged 23 years—bilious temperement. Found that she had been in labor for eight hours. Delivery was soon effected. Made a slow convalescence.

About the middle of March she complained of pain in the sacro-lumbar region, with urinary trouble, constipation of the bowels, and intermittent fever. This history was given us by her husband, at our office, and we prescribed an alterative—quinine and iron—and equal parts of spts. nitre, and fluid ext. uva ursi.

May 1st. Was called to see her, and found her in about the same condition as reported by her husband. We suspected uterine trouble and made a speculum examination. Found considerable congestion of the os-uteri. Believing that this, in part, was causing her trouble, we cauterized the os-uteri freely with lunar caustic; and continued the former constitutional treatment.

May 10th. We returned to continue the treatment, but on introducing the speculum our attention was attracted by extreme soreness of the meatus urinarius. We then directed our investi-

gation to the bladder, and at once diagnosed "Chronic Cystitis." Upon examination we found the following symptoms existing: A throbbing and burning sensation in the hypogastrium, with acute pains above the pubis, which region manifested great tenderness upon pressure; a very urgent desire to urinate, with an excruciating pain at the neck of the bladder during the passage of urine, which was scanty and mixed with pus. Upon interrogating the patient we found that these symptoms had existed, to a greater or less extent, for twelve months previous. As we did not test the urine, we arrived at no definite conclusion as regards the original cause; but believed that the protracted labor above referred to, was an aggravating cause.

We determined to give the case the full benefit of the nitrate of silver by injection; but not being prepared to carry our treatment into immediate effect, we continued the constitutional treatment, and appointed a day to return. We returned according to appointment, introduced a silver catheter, evacuated the bladder of its contents. Then, by introducing the small pipe of a Davidson syringe into the mouth of the catheter we injected warm water, and allowed it to flow back, thereby, washing out the bladder; after which we immediately injected the following solution: ℞. Nitrate of silver (crystal.), gr. xx; Distilled water, ℥ijss.; Glycerine, ℥ss.; Mix; which we allowed to remain about five minutes; then washed out the bladder again with warm water. This treatment caused a considerable amount of pain We gave the mur. tinct. of iron and quinine three times daily, and gave seidlitz powders as an aperient. At our next visit, which was ten days later, we found a general improvement. We repeated the injection, double strength; and continued constitutional treatment. On our return, still ten days later, we found a marked improvement. We

increased the injection at this visit to grs. lx. This did not cause as much pain as the twenty grain injection did.

On the 13th of June we visited our patient again, and considered her about well. Gave her another drachm injection of the nitrate of silver. We continued the constitutional treatment two weeks longer, the patient being well we discharged the case. She has continued in good health up to this time. We would remark that we allowed this patient to select her diet.

CASE REPORTED

—BY—

T. J. HEARD, M. D.

SESSILE POLYPUS OF THE MEATUS URINALIS, IN A FEMALE.

On the first of February, 1876, I was called to Mrs. H., about fifty years of age. Nervo-bilious temperament. Menstruation had ceased at about her forty-fifth year. She is a native of Texas, and her health in every respect had been uniformly good, until about three months since, when some obstruction to urination, attended with pain, occurred. On examination, I found a blood-red tumor protuding from the urethra, about the size of a large cherry. It was not sensitive to pressure, but bled freely from slight handling. It involved the orifice of the urethra, and extended up about three-fourths of an inch on the inferior wall of the same. I at once used locally chrystalized carbolic acid quite freely, which was unattended with much pain.—February 3rd. The tumor at first receded under the influence of the remedy, but after three days it was found to be as large as at first. I now used strong nitric acid freely, which caused but little pain.—February 6th. As under the influence of carbolic acid it receded, but was reproduced; I again used carbolic acid freely, partly with the view of its anæsthetic effect, and then used concentrated chromic acid as freely as I thought prudent. February 12th. Sundry detergents and astringents had been used, which it is not necessay to make mention of here. The chromic acid had caused a good deal of pain. The slough was removed and the

chromic acid was used again.—February 18th. The patient had experienced pain as before, but the base of the tumor presented the same appearance as on the 12th. I applied carbolic acid carefully, and then with a tenaculum and dressing forceps lacerated and removed as much of the base of the tumor as I could consistently. I thereupon applied and held in close contact with the base of the tumor, for five minutes, the following—a thin film of paper being interposed on the upper wall of the urethra:

℞. Potassii bromidi, } aa. gr. x. M.
Acidi tannici, }

By careful levigation, reduce to a mass, and make suppository three-fourths of an inch in length. The effect was prompt, and intensely painful for half an hour—the actual cautery could not, seemingly, have been more so.—February 20th. The base of the tumor has, to all appearances, disappeared and there only remains, instead, a charred, slight prominence of the parts. The patient I am informed, is well, and the tumor has not evinced the least tendency to return.

The leading motive in reporting the above case is to show what can be accomplished by the above combination of bromide of potassium and tannin.

CASES REPORTED

—BY—

G. W. HOLCOM, M. D.

HIP JOINT DISEASE.

I wish to report a synopsis of two cases of Hip Joint Disease, which were of exceeding interest to me, and which may be of some interest to the profession in a statistical way. I promise that this paper shall have one feature of interest to you—brevity.

E. J. A., girl, twelve or thirteen years old, when she came under my care, had fistulous openings about the hip joint, of two years standing. Her father told me that, about two and a half or three years previous to my seeing her, she had a severe attack of what the doctor told him was rheumatism of the knee-joint, from which she suffered almost incessantly for a month or six weeks, after which she slowly convalesced and got able to walk on a crutch and go to school; that, probably six months from her first illness, a swelling showed itself a little posterior and inferior to the trochanter major, which opened itself and discharged considerable pus, and from that time on had been opening and closing at intervals; and that a small bit of bone passed out every time it opened. I decided, at once, that the head of the femur was carious and ought to be excised. I made an incision five or six inches long over the great trochanter quite down to the bone. I began low enough to avoid the deep superior branch of the gluteal artery; separated the tissues from about the neck of the bone with a cartilage knife; dislocated femur; thrust it through

the wound and sawed it off; closed the wound with four stitches and adhesive straps. This case got well without an unfavorable symptom, and has been well since, nearly a year ago. The joint has free motion and considerable strength.

CASE 2ND.—A negro girl (similar in nearly all respects to the first) six or seven years old. I operated in the same way, but with not as much success as in the first case. The wound healed but reopened in six weeks or two months and has been suppurating since, nearly eight months. This case had bad care, and was under miserable hygiene. The details of these cases are materially the same as in other cases, hence I will not consume your time with them.

CASES REPORTED

—BY—

T. D. MANNING, M. D.

CASE I.—AMBLYOPIA FROM RETINITIS PIGMENTOSA.

Lula M., aged 13 years, brunette, of stout proportions, made application for admission into the Texas Institute for the Blind, during the month of June, 1875. The spring term of that institution was about to close, and she could not, therefore, be admitted before September following. Her case was, however, submitted, and I elicited the following history: Ever since early child-hood, and especially since her first attendance at the common school (which was at an early age), she has complained more or less of "weak eyes." The trouble, at first, was not so much an actual dimness of vision, as it was an inability on the part of her eyes to undergo continued exercise. At the close of each day's labor at school, her eyes felt fatigued, tired, and were easily suffused. These symptoms continued, gradually increasing into those of suspected failure of sight; she was compelled still later to hold a book very near her eyes in order to discern the print; and finally, two months previous to her application for admission into the Institution, dimness of vision culminated into actual blindness throughout a greater part of the field of vision in the left eye, and inability to read ordinary print with the right eye.

Her eyes presented a vacant, groping look, as if nothing was seen distinctly, while a decidedly convergent strabismus was noticeable in the left eye. The ophthalmoscope revealed at once

a wide spread pigmentary deposit throughout both retinæ, the extent of deposit being about equal in the two eyes. Large dark masses, composed of granular or "irregular shaped spots," with prolongations shooting out in different directions, occupied most of the face of each retina. These prolongations were particularly directed in the course of the retinal vessels. There was no marked increased tension in either eye, but anæmia of the left retina was perceptible.

The necessity of immediate attention was urged, but four or five months elapsed before she came under my charge for treatment. At the second examination, in November, the left eye was found to have only quantitative perception of light from the temporal side; the right eye could distinguish No. L., Snellen, at twelve feet, from the temporal side—the field of vision being exceedingly narrow; many of the retinal vessels of the left eye were apparently obliterated, the remaining large ones being much diminished in calibre; while the retina of the right eye showed a decided paleness. Hemeralopia was now distinctly marked, and a general headache prevailed at night, robbing her of sleep. This headache was due, in part, no doubt, as Von Graefe has pointed out, "to the failing sight, and is produced by the intent endeavor of the patient still thoroughly to realize the visual impression."

The case, after thorough analysis, was considered almost hopeless, but it was determined, at last, to perform a large upward iridectomy in the right eye for therapeutical purposes, to remove at least one-fifth of the iris through an upward incision in the sclero-corneal junction. After the operation, the eye was kept bandaged for four or five days with a compress of cotton-wool. No pain was now experienced in the region of either eye, and when the bandage was removed, the patient declared, at once, she could see, by far, better out of either eye than she could previous to the operation. Two months later, her sight was tested

and it was found she could read ordinary print for a short time with her right eye; and can now, five months since the operation, read the finest print from the same side. The left eye, before considered as entirely amaurotic beyond any relief, was also improved somewhat in sight, but not as much as the patient imagined. This slight improvement, together with a recurrence of pain on the left side, was an inducement to perform a like operation on the second eye. It resulted in a marked and permanent relief of pain about the orbital region, but furnished no additional improvement of sight, and although the iridectomy was not as extensive as desired—the iris not being removed up to its ciliary attachment—yet the failure in giving any increase of vision was due, no doubt, to the previous atrophy of the optic nerve, as was revealed by the ophthalmoscope.

REMARKS.—The prognosis in this disease is very unfavorable. No treatment is particularly insisted upon, and we are taught to merely protect the eyes from bright light and over-taxation. It is evident that the disease, *retinitis pigmentosa*, is characterized by a decided torpor of the retina; the retinal vessels diminish in calibre and many of the smaller branches are apparently obliterated. Schweiger has pointed out, that this torpor of the retina "is due to the fact that, on account of the diminution of the calibre of the arteries, an insufficient amount of blood is supplied to the arteries;" and all agree that the pigmentation of the retina follows the contraction of the arteries, and is not the direct cause of blindness. It was with a view of relieving this torpor, of causing a determination of blood to the retina, that an extensive iridectomy was considered, although no unusual tension was perceptible, which was the chief point that directed Graefe to perform this operation for the relief of glaucoma; first, to relieve the intra-ocular pressure and, as a result, to establish a normal condition of the retina. There has been no case of retinitis

pigmentosa, under the knowledge of the writer, reported, which was treated by the performance of an iridectomy, in the same manner as an incipient glaucoma is treated; especially so, when no abnormal tension of the globe could possibly be discovered.

The case is, by no means, offered as being sufficient to establish a treatment, for whether the patient was relieved by the operation, or that it was merely a coincident is not known; however, it is certain, that before the iridectomy was performed sight was very limited in one eye, and entirely absent in the other eye, and after its performance, the patient could read ordinary print with her right eye, and there was some improvement of the left. Nor is it known in what way the iridectomy may have relieved the retina, any more than it is known how the intra-ocular pressure of glaucoma is relieved by the same operation.

It would, perhaps, be well enough to state that the patient has a brother three years younger than herself who is affected with the same disease. The pigmentation in his eyes appears to be about equal with the extent of deposit in the eyes of his sister, but still he has very good sight on first impression, and will receive the same treatment as she did, but with a hope of saving both eyes, as the sight of neither eye is yet destroyed.

CASE II.—ASPERGILLAS GLAUCUS IN THE AUDITORY CANAL.

Mr. J. J., aged thirty-two years, an exceedingly stout and healthy farmer, living in McLennan county, Texas, applied to Dr. J. H. Sears, of Waco, Texas, during the early part of the year, 1875, to be relieved of constant pain and roaring in the left ear with marked impairment of hearing on the same side. The auditory canal was thoroughly examined, and "a small white patch of very delicate pellicle" was discovered on the floor

of the meatus, "contiguous to the membrana tympani." This was removed, and considered to be nothing more than a scab-like exfoliation mixed with the normal secretion of the ear. The patient was relieved by the removal, given an astringent wash, and sent home. In a short time he returned complaining of the same trouble, fullness in the ear, pain, tinnitus aurium, and impaired hearing. A second examination revealed a similar collection of pellicle in the same location as mentioned above. It was again removed and a wash of nitrate of silver painted over the surface, which, after the removal of the mass, presented a red glistening appearance. This plan of treatment was now kept up for five or six months. Every week a cotton-like substance being scraped away, to give place for a similar collection in seven or eight days; the only difference being an apparent increase in the extent and thickness of the mass. During this time a full list of agents were employed; washes of sulphate of copper, sulphate of zinc, tannin, carbolic acid, and warm water douches, etc.; but the use of none of these remedies would stay the rapid growth of the fungoid mass, now filling up the entire canal every week. The removal of these masses was attended with no difficulty. They were peeled out at each visit of the patient, and greatly resembled pledgets of cotton-wool; indeed, so near resembling bits of cotton-wool, that a careless observer, with no knowledge of a previous history of the case, would certainly mistake the fungus for pledgets of cotton placed in the ear by the patient. Within two weeks, at two different settings, Dr. Sears removed two plugs from his patient's ear, each one completely filling up the auditory space, so that no view of the membrana tympani could be obtained. The constant and rapid growth of this foreign something, resisting ordinary treatment so successfully for five or six months, and, in fact, growing luxuriantly under the treatment, as though the medicines were so many fertilizers, together with its

peculiar appearance, brought about a suspicion with him that the morbid product might be a variety of "mould fungus," and he accordingly subjected it to a close microscopic examination and found "numerous long mushroom tubes with roundish spores," described as being characteristic of the vegetable parasite, aspergillus glaucus. This discovery, at once, established a new treatment; and now removing the mould for the last time, and applying a solution of sulphite of soda, ℈ij, to warm water, ℥j, over the red glistening surface where the fungus was wont to grow, he had the satisfaction of entirely relieving his patient, which relief has continued up to date.

REMARKS.—The notes in this case were kindly furnished the writer by Dr. Sears, who would also have furnished a fine specimen of the fungus, if it had not been destroyed, with his office, by fire three months ago. We deem the case as one particularly interesting for several reasons: quite a limited number of cases of this disease has ever been reported—only fifteen up to date—while "there is hardly a doubt," as observed by Roosa, "that an affection of the ear, caused by the aspergillus, has existed for a long time, if not always. Since his attention has been turned to the subject, he could recall obstinate cases of inflammation of the auditory canal, which contained the growth." The case being considered was under treatment five or six months before the true nature of the disease was discovered, and might have passed entirely unnoticed if, by accident, a proper remedy for the destruction of the fungus had not been employed; hence, the necessity of keeping such a disease, probably so frequent an affection of the ear, and yet, scarcely expected by the physician, constantly before the profession. Again, the experience of Knapp, Roosa and others, that the morbid growth is destroyed by its removal and the use of warm water, did not obtain in Dr. Sears' case, which appeared to be, instead of one of the varieties of aspergil-

lus, a mixed variety, in which both the aspergillus flavescens and the nigricans were present. The treatment, however, is very easily directed after a correct diagnosis is made. Dislodge the mass of "mould fungus and apply any one of the anti-zymotic remedies," sulphite or hyposulphite of soda; hydrate of chloral, and may be salicylic acid.

THE HYMEN;

ITS ANATOMY AND MALFORMATIONS; SYMPTOMS AND TREATMENT OF ITS IMPERFORATE DEFORMITY;

—WITH—

A REPORT OF THREE CASES.

—BY—

S. R. BURROUGHS, M. D.

The subject of this paper we deem of sufficient importance to demand more attention and consideration at the hands of Gynæcological authors than it has heretofore received, so far as we have been able to ascertain from the various works we have had the pleasure of examining.

The Medico-Jurists, of both Europe and America, have long since thoroughly discussed its value, relative to its presence or absence, its soundness or rupture, as evidence of the purity or pollution of any given individual, and have wisely given to it its proper indicative influence. Since there can be no question as regards its entire abscence in many children at birth, its presence or absence cannot be received as proof positive of virginity or non-virginity.

As we propose, however, treating this subject from a purely medical point of view, leaving its medico-legal bearings untouched, we proceed at once with a brief consideration of the respective divisions of our subject.

The hymen consists of a double fold of mucous membrane, with a delicate fibrous structure intervening, which is said to be of a muscular character. Its most usual form has been very

fitly compared to that of a crescent; it is situated just within the external extremity of the vaginal tube, the entrance to which it partially guards. When viewed while the subject is in the recumbent position, it presents itself resting with its convexity in continuity with the posterior wall of the vagina upon whose lateral surfaces its pointed extremities extend forward or upward. This mucous fold is continuous with that membrane lining the internal parietes of the vaginal canal, and also that which anteriorly loses itself in the muco-cutaneous tissue.

Its base, as a rule, is situated a distance varying from one-fourth to three-fourths of an inch within the ostium vaginæ. Immediately anterior to this base, which corresponds to the greatest width of the hymen, and between it and the posterior commissure, is a slight depression, or transverse sulcus, called the "Fossa Navicularis." This organ is supplied with blood-vessels, nerves, absorbents and mucous follicles, and is, therefore, endowed with a very high degree of sensibility; its depth is subject to much variation in different cases. In some instances the elevation is so slight as to scarcely give a manifestation of its existence, while, on the other hand, it may completely and securely close the external extremity of the vaginal tube. The thickness of this fold, like its depth, is very variable; we may, therefore, in some instances, find this organ presenting such a delicate, frail texture, as to be easily torn or broken down by the smallest degree of violence; it is, indeed, not unfrequently ruptured or destroyed, during exercise in the various sports to which children are accustomed, without even the subject being cognizant of the fact, in consequence of the diminished degree of sensibility manifested in the part, in these particular cases. On the contrary, this organ has been found possessing such a quality of thickness, elasticity and density as to have resisted all efforts at rupture in the copulative act, maintaining its integrity after impregnation and

even retarding the process of parturition to such an extent as to require surgical interference. It is, however, always destroyed in the first labor, the fragments retracting and forming a variable number of irregularly shaped bodies termed "*Carunculæ Myrtiformes.*" It is very evident, therefore, that its specific density differs much in different subjects.

For the sake of convenience and easy comprehension, we may divide the malformations and malpositions of the Hymen into two great classes, distributing all those cases in which the catamenial flow and the urine are not completely obstructed to the first class, and the imperforate condition to the second class.

1. In a small proportion of instances, the base of this membrane, though it may preserve its ordinary crescent form, is found occupying a position coincident with the centre of the right or left lateral wall of the vagina, as the case may be, with one of its pointed extremities indicating the most anterior point of the ostium vaginæ, while the other occupies a corresponding position posteriorly. One instance in which this particular malposition occurred passed under our immediate observation, exhibiting in a most beautiful manner a well-defined crescent outline. It presented itself in the person of an infant, and while closely inspecting it, its appearance conveyed to our mind the impression that it resembled, in a marked, degree a delicate pair of callipers taking the antero-posterior diameter of the ostium vaginæ.

On careful and extended observation, it will be found that cases are not wanting wherein this organ, in its most usual form, occupies a position directly opposite that which it ordinarily assumes, having its base directed upward or anteriorly, according to the respective position of the subject, with its

pointed extremities downward or backward. We are inclined to believe that this particular malposition is not so rare as is generally believed, for we have met with two such cases in a practice embracing ten years, but we make it an invariable rule to carefully inspect the genito-urinary organ of all infants born under our professional care.

An instance has been reported to me as occurring in the practice of an intelligent and reliable physician, in which the organ was a cleft, consisting of two folds, the commissure originating at the most anterior part of the vaginal orifice, the two portions gradually separating in their course backwards, and finally losing themselves in the lateral mucous tissue, exhibiting a most accurate analogy to two curtains, parting at a common centre and drawn to either side.

We have noticed in some medical work or journal, the report of a case in which the base was situated directly in front of the meatus urinarius, completely obscuring this orifice from view; the urine, in passing from the bladder would fall upon this curtain-valve, and regurgitate, as it were, backwards into the vagina, and would from thence pass outward upon the napkin, in small or large quantities proportioned to the position or movements of the child.

This unnatural position of the organ is calculated to be the source of much anxiety and trouble, on the part of the mother, besides, by casting the irritating and decomposing excretion of the kidneys into a part unprepared for its reception, vaginitis may be established. We would, therefore, recommend, in all instances where this condition of the organ obtains, a vertical incision, with a probe-pointed bistoury, thus converting it into the cleft deformity, and then, with a pair of scissors curved upon the flat, the removal of the two lateral halves in their

entirety. This procedure will, in all cases, where it is properly executed, correct the malformation and remove all source of future irritation and trouble.

Again, in a certain proportion of subjects, this organ is found presenting the form of a membranous disk, varying in thickness and density, and perforated at its central point by a circular aperture.

This variety presents several objectionable features. First, it offers in many instances an effectual barrier to the consummation of marital rites; second, it may prolong labor to an unwarantable extent, by retarding the process of dilatation of the parts to which its circumference is attached, when it is tough, dense and elastic; third, under certain circumstances, it acts as a concomitant cause of "Laceration of the Perineum."

Comment is wholly unnecessary, in explanation of the value of the first of these objections, for there are numerous instances on record that fully authenticate the assertion, and certainly there can exist no thinking mind that will abrogate its great relative importance to the marital rights of man.

In regard to the second feature, above noted, we are firmly convinced, by our own observation, and our knowledge of that of others, that a tough, dense and unyielding hymen will greatly retard the natural process of labor. The head of the fœtus, in all natural presentations, in its passage through the vaginal tube engages this membrane, which, in many instances, may offer that degree of continued resistance, sufficient to exhaust the expulsive powers of the uterine organ, in its attempts to force a passage for its contents. A complete inertia of the womb supervenes; and all the measures usually adopted to excite a renewal of the contractions, may prove abortive in the extreme, and the unpleasant and embarrassing circumstances, enjoin upon the medical attendant a resort to the forceps for aid in the completion of labor; an

alternative, which might have been avoided by destroying the rigid membrane before the labor proceeded too far, and which is never void of danger, both to the mother and her infant, unless practiced by skillful hands.

This brings us to a consideration of the third and last feature, namely: that in which the hymen may act as a concomitant or primary cause of laceration of the perineum. It must be remembered that in all first labors this membrane is destroyed or broken down; and that its resisting force is spent in conjunction with other parts, which have never been subjected to the dilative and expulsive powers of labor. That a rent, begun in the hymen during expulsive throes of parturition, is more likely to be continued into, and in exceptional cases, through the perineum, than otherwise, we are prepared at present to accept. That laceration of the perineum in cases when a rigid hymen existed is to a certain extent due to the condition and presence of the latter, we can entertain no doubt. During that stage of labor, when the perineum and adjacent parts are so greatly distended by the presence of the fœtal head, the sudden rupture of a rigid hymen will in many cases be followed by a partial or complete laceration of the perineum, and the escape of the fœtal head, from the mother's parts, or in other words, the sudden impetus given to the advancing part by the quick abstraction of the retentive force of the hymen would be amply sufficient to precipitate the presenting part through the vulva with such violence as to tear the parts asunder to a greater or less extent. The extent to which the solution of continuity may be carried in any given case, will depend, in a very great degree, upon the condition of all the relative parts. If the case be a lingering one, and has been subjected to frequent and unnecessary examinations by the *touch*, and all the tissues concerned have become elevated in temperature, diminished in lubricity, and a state of dry rigidity prevails, it will

at once be seen that such a concurrence, coincident with a dense hymen, would very greatly increase the danger to partial or complete laceration.

An abnormal increase in the diameters of the fœtal head, the particular conformation of the pelvic canal, an unyielding coccyx and the age of the subject will also contribute their relative influence toward such a termination.

We cannot refrain from expressing our opinion, that in all cases where the hymen offers *decided* resistance, it should be divided by a probe-pointed bistoury at two lateral points, before its spontaneous rupture, more especially should this procedure be adopted if the age of the patient exceed twenty-five, thus obviating the danger to perineal laceration by the impetus given to the presenting part of the fœtus by its sudden disruption. Prof. Hodge, in his valuable work on obstetrics, says, "when labor is resisted by a dense hymen, crucial incisions may answer."

2. Again, in very rare instances this organ is observed to preserve the form of a disk having no central aperture, thus efficiently occluding the ostium vaginæ, its density and elasticity being relatively proportioned, and alike subject to such variations as obtains in other forms.

This form of the organ has two very important anatomical positions, namely: one in which the anterior portion of its arc is located just below, or in front of the *meatus urinarius*, and within the sulcus formed by the labia minora, at the base of the clitoris; and the second position is represented in cases where the frontal hemisphere of the disk is in continuity with the mucous membrane posterior to, or above the urinary orifice. These two positions are named inversely as regards their frequency of occurence.

It will be observed that the position occupied by this organ in the first instance, would, if its toleration were possible to the period of puberty, not only present an insurmountable barrier to

the exit of the secretion coming from the kidneys, but would also obstruct the flow of the catamenia, and cause a retention of that liquid. Moreover, if there be a communication between the urinary orific and the vaginal tube, the bladder will relieve itself for a given time, by pouring its contents into this canal. It will be readily understood that such a relative condition of the parts involved would virtually convert the urino-genital apparatus into one common tube, characterized by dilatations and contractions at various points throughout its course, corresponding in form, function, and locality, to the pelvis of the kidney, the ureters, bladder, urethra, vagina, uterus and fallopian tubes, thus establishing communication between the pelvis of the kidney, through a mucous channel, and the peritoneum. It is also very obvious that this condition can remain but a short time, without the supervention of uræmic poisoning, and *possibly* peritonitis, resulting in the speedy death of the infant. An absence, therefore, of the discharge of the natural excretion, together with the presence of symptoms of uræmia, would naturally lead to the discovery of the deformity, which can only be corrected by surgical interference.

This peculiar deformity of the hymen is certainly of the rarest occurrence; I have never noticed in any work or journal a record of such a malposition. I have here described it and placed it in the second class, according to my classification, in consequence of having had a case to occur in my own practice. It has also been our privilege to meet with and treat two inveterate cases of imperforate hymen, where the urinary orifice was not involved, and, in order to illustrate our subject by actual, observed facts, we propose giving as succinct a report of each of these cases as their nature will admit.

Case 1st.—In September 1868, I was consulted by a negro, regarding the condition of his child, which was then three days

old. He stated that the old midwife (an aged negress) had made the impression upon his mind that there was something of a very serious nature affecting his child; that it had not passed any water since its birth, from the bladder, but had had free dejections of a watery character from the bowels; that it was quite restless, required some one to nurse it, and carry it about all the time; that it would bend itself backwards by sudden jerks and scream loudly. Never having seen a case of this character, I convinced him that the probabilities were that his infant passed urine at the same time that the bowels moved, and that he was certainly mistaken in the matter. I directed him to return and give it a warm bath, and from twenty to thirty drops of sweet spirits of nitre largely diluted in water or tea, every three hours and to closely examine the napkins. On the following day he returned, and stated that he had followed out my directions but that no urine had passed; that his child had ceased to nurse, and was having spasms when he left. I rode five miles and found my little patient suffering from regular couvulsive attacks, occuring about every twenty minutes, with high febrile disturbance, crying and turning about incessantly, in the intervals of the convulsive attacks. On inspecting the urino-genital organs I discovered a thin delicate membrane slightly protruding between the labia, evidently containing a liquid, and traversed by blood-vessels. No external opening of the urethra could be detected, and on close examination, this membane revealed itself to be an imperforate hymen, having its anterior arc in continuity with the mucous tissue in front of the *meatus urinarius*, completely blocking up the entrance both to the vagina and urethra. By the aid of a delicate exploring needle, I discovered this liquid to be confined urine. All of the adjacent parts were greatly swollen, from infiltration, the hypogastric region being at the same time very much distended, and exceedingly tender and sensitive, occasioned

by the presence of an abnormal volume of liquid, which was decidedly manifest by palpation, as a fluctuating sensation was most distinctly communicated to the finger when applied to the genital tumor, and a gentle stroke made upon the fundus of the abdominal enlargement.

Being fully satisfied as to the anatomical condition, I plunged a bistoury, previously encircled by a thread to within a quarter of an inch of its point, into the projecting membrane, and apparently one pint and a half of urine flowed away with a gush. I then dissected from its site the entire membrane—but little hemorrhage occuring—and introduced a pledget of lint well-oiled, and directed it to be removed and reapplied, until the parts healed. The child went into a quiet and refreshing sleep, as soon as the urine passed out of the bladder and vagina, both these organs being coincidently filled to their utmost capacities, with this liquid. In four or five days the cut surfaces were nicely healed, and I had no further trouble with the case.

Case 2nd.—In the spring of 1872, I was called to see Miss S——, aged fifteen, and found her possessing a well-developed outline and robust constitution. The tongue was clean, and no febrile excitement present. She was suffering from a severe throbbing pain located at the base of the occiput; grinding pains in the uterine region, radiating occasionally to the loins and inside of the thighs, being of a marked intermittent type, and appearing with a moderate degree of regularity, simulating very much the actual advent of a real labor. On examination of the abdomen, I discovered a pear-shaped tumor whose fundus almost reached the umbilical region; rather hard, yet manifesting a small amount of elasticity. Pressure invariably excited pains of a most excruciating character, at its lower extremity, corresponding to the *os uteri;* the presence of a fluid could not be satisfactorily established by palpation, nor could a placental *souffle,* or

the beat of a fœtal heart be detected by the most carefully conducted auscultation. The general appearance was characterized by a bloated condition, yet the beautiful and well-defined outline of the tumor excluded *ascites*, and the locality and peculiar character of the pains, all indicated uterine trouble.

The mother of the patient informed me that she had never menstruated; that she had always enjoyed excellent health up to six months previous, at which time she suffered from dull pains in the head, back and hypogastrium, occasionally accompanied with slight nausea and anorexia; a general indisposition to both physical and mental exercise, together with somnolency, prevailed. These symptoms reached their acme about the third day, and gradually disappeared in the same space of time, a moderate degree of health being afterwards maintained, until twenty-five or thirty days elapsed when they reappeared with a slight increase in their violence. A repetition of these morbid phenomena occurred regularly manifesting a gradual augmentation in their severity in each succeeding attack, attended with a commensurate decline in health until the suffering became so great as to demand attention.

Nothing beyond domestic therapeutics, such as teas, baths, etc., had been employed. I announced to the mother it would be necessary to make an examination *per vaginam*, before I could arrive at any definite conclusion as to the cause of the daughter's trouble, making such explanations as were requisite for such a demand. Probably from an exalted sense of delicacy and a high degree of aversion to such a procedure (natural with all young ladies) she refused submission. Being satisfied that her trouble was dependent upon, either occlusion of the *os tincæ*, atresia of the vagina, imperforate hymen, or uterine growth of some character, and that the symptoms would become aggravated to such an intensity, that my patient would acquiesce to any pro-

cedure that would offer relief, I made no prescription, excepting fifteen grains of chloral hydrate, from the influence of which she obtained quite a refreshing sleep; the pains ceased, and the molimen slowly passed off. I was not consulted again until the next epoch was reached, which returned with marked regularity; I was called in great haste, and found my patient suffering the agonies of a labor; the eyes were suffused with tears, with a very dark areola beneath them; cramps of the lower extremities were manifest, and sharp transient pains also experienced in the mammary glands, the latter being somewhat enlarged and indurated. The circulation was slightly accelerated, the tongue covered with a drity white fur; the temperature was increased to a small extent, and a frequent desire to micturate, which act was attended with a burning, pungent pain, and the escape of only a few drops of urine. The patient would scream at the top of her voice, on the accession of the pains. I requested an examination *per vaginam*, which was readily granted. I found a scarlet-red tumor filled with a liquid, and about the size of a large goose-egg projecting between the *labia majora;* I passed my finger between its anterior rotundity and the pubic arch, discovered the *meatus urinarius*, introduced a silver catheter and about one pint of highly-colored urine flowed away. Leaving the catheter *in situ*, I placed the index finger of the left hand against the most pendant part of the tumor, and on gently striking its fundus with the tips of the fingers of the right, a distinct fluctuation was perceptible, and a like sensation could be communicated in a reverse direction. The introduction of the finger into the rectum detected the presence of a liquid between that organ and the bladder, as discerned by the aid of the catheter. My diagnosis being fully established, in the absence of any discoverable hernia, I directed that measures be adopted for the reception of the fluid, and that a light bandage be applied to the abdomen, of sufficient

width, and in such a manner that it could be easily tightened and well adjusted if necessary. I then plunged a bistoury, previously wrapped to within half an inch of its point with a thread, into the sac, and the escape of a black, grumous looking liquid occurred with such force as to be projected a distance of five or six feet; immediate relief was experienced by the patient, and the bandage was gradually tightened as the uterine volume diminished. The total amount of the liquid was estimated at twenty-five or thirty ounces, but it continued to pass in clots and small quantities for several days. After the greater part, however, had passed, I completed a crucial incision to the circumference of the membrane, introduced an oiled tent, and directed it to be renewed and the parts cleansed daily, until healed. I gave her iron and quinine, three times a day for fourteen days, and her health was rapidly regained.

CASE 3RD.—About the first of November, 1875, I was consulted by a lady in regard to the health of her daughter. She stated that she would be fourteen years old in February, 1876; that she had been in good health up to the previous June, at which time she suffered for several days with pain in the head and back, slight anorexia, and diminished physical and mental energy; that these phenomena had returned, since that time, at regular monthly epochs, with some degree of augmentation in their manifestations, at each successive period; that she had never menstruated, and at that time was suffering much from pain in the lower part of her abdomen and back, the former being smartly swollen, and rather tender to the touch; that at each molimen she was distressed with a frequent inclination to pass her urine, which flowed with difficulty, pain, and in small quantities; that a disposition to sleep continually prevailed, and was only partially overcome by keeping her at school.

As I could not see the patient at that time, and the probabili-

ties were that the youthful constitution was making unsuccessful attempts to establish the menstrual flow, in consequence of an impoverished condition of the blood, I gave her the following prescription:

℞. Ferri Redacti, grs. 100;
Quiniæ Sulphatis, " 50;
Syrup. Simp. q. s.
} M. ft. Pil. No. 50.

Sig. One pill after each meal.

Directed that the body be well clothed, and as much out-door exercise be indulged in as could be borne without fatigue. I did not hear from her until the 26th day of December, 1875. Her mother brought her to my office for examination, which was conducted as in the above mentioned case, and a dense, thick, and unyielding, imperforate hymen discovered. The uterine tumor, which exhibited the appearance of that organ advanced about six months in pregnancy, gave all the symptoms that were manifest in the above detailed case. I operated by a crucial incision, at the lady's residence, on the 27th of December, giving exit to about twenty or thirty ounces of black decomposed blood, intermingled with purulent matter. After the greater volume of this liquid mass had passed, I dissected the four quarters of the disk from their vaginal continuity, and directed an oiled tent to be placed in the opening, and kept *in situ* until the parts healed. My patient suffered severely for an hour or two after the operation with uterine pains, which, however, were subsequently controlled by chloral hydrate. As the bowels were a little constipated I gave her a dose of magnesia, and followed its action by quinine and iron, three times a day, for several days, and her health speedily returned without any further trouble. This membrane was about one-eighth of an inch thick, very dense in structure, and possessed sufficient rigidity to prevent the pressure of the liquid, on its internal surface, from causing it to bulge or protude externally.

In conclusion, we would remark that case first, is not only interesting from its rare occurrence, but in that it combines both a malformation and a malposition, connecting the urino-genital apparatus into one irregular common canal.

I have failed so far to find a record of a similar case, in the books and journals to which I have had access.

Cases second and third are important, inasmuch, as they establish the following facts:

1. It shows us the great necessity of carefully examining the urino-genital organs of all children born under our professional care, and correcting any deformity that may be discovered.

2. By correcting these malformations and malpositions in the infant, there remains no barrier to the consummation of marital rites.

3. That great suffering, constitutional disturbance, and much embarrassment, both on the part of the patient and medical attendant, obtains in these cases from a neglect of duty on the part of the obstetrician.

4. The second case demonstrates to us that a peculiar sympathy may be excited between the uterus and mammæ, irrespective of utero-gestation.

Finally, it is also worthy of remark that neither of these cases exhibited any symptoms whatever, that could be attributed to the results of a regurgitation of the retained liquid through the fallopian tubes, although uterine contractions were excited by its increasing volume and continued presence.

RETENTION OF DEAD FŒTUS IN UTERO.

—BY—

A. R. KILPATRICK, M. D., NAVASOTA, TEXAS.

Knowing that there is a difference of opinion on this subject amongst practitioners and medical authors, and having met with two cases of retention of the dead fœtus in utero, I am ininduced to report them for the benefit of this Association; although one of the cases has already been published in a medical journal; yet, as I believe, not many of those present have read that report, I think I am excusable in repeating it here.

The question of greatest importance is, what is the effect on the mother? Is she injured by such retention?

In systematic works on obstetrics and gynœcology, we find but little said on this subject, although the fact has been long known, and many cases bave been reported in medical journals from time to time, yet their rarity and singularity are such as to attract attention.

Dr. Kemper, of Indiana, has recently published a monograph on this subject, and I must acknowledge my indebtedness to his paper for some data here produced, as my collection of books is not as extensive as his seems to be.

We occasionally meet with reports of cases of parturition where a dead, immature fœtus is expelled at the birth of a live one, and Cazeaux reports several cases in his *System of Obstetrics*, in which a living fœtus was expelled at full term with two dead ones which appeared to have been dead a long time. Other cases are reported where a dead fœtus is expelled at an

early period of gestation, and a living fœtus retains its position and goes to the full period, terminated with a natural, or normal labor. This is doubtless owing to the different positions in utero of the fœtuses; the one, or the two, which are expelled prematurely, occupying the lower zone of the uterus, near the os, while the more fortunate one is in the middle, or upper zone. The best diagram showing the uterine zones can be seen in Dr. Tyler Smith's work on *Obstetrics*. There seems to be a law of nature, however, in these cases, viz: That in every case of plural pregnancy in which the offspring dies in utero, the fruit is expelled before, or at the ninth month, and where the retention is prolonged beyond that period there is only one fœtus. The question presents itself here, why should the uterus expel its dead contents at the ninth month as in cases of normal pregnancy? There is no increment or growth of the fœtus or uterus after the death; and why is it not expelled at the time of death, or soon after it? We can only acknowledge our ignorance, or satisfy ourselves by supposing that the determining cause of labor is lacking. And what is that determining cause? The distinguished physiologist, Brown-Sequard, holds that carbonic acid is the cause, "exciting, by direct contact of venous blood, the uterine fibres into contraction," while Dr. Wm. T. Lusk, of New York, attributes it to fatty degeneration of the uterine substance*. The question is *sub judice*, and I leave it unanswered.

In case the determining cause of labor fails to act, and the fœtus is retained beyond the ninth month, its expulsion may be postponed indefinitely. Cases are to be found in the medical journals. One by Dr. Coxe, of Frankfort, Indiana, where

* In Dr. Lusk's Lectures on Obstetrics and Diseases of Women, delivered at Bellevue Hospital Medical College, in 1875, he uses this language: "At the conclusion of the ninth month of gestation, a fatty degeneration takes place, which causes the separation of the decidua from the interior surface of the uterus. The ovum then becomes a foreign body, which stimulates the contractions of the uterus, and the expulsion of the fœtus follows:" *See Med. and Surg. Reporter*, 11*th December*, 1875.

the fœtus was found, upon autopsy of the mother, which had been retained over five years. Another, reported by Dr. Hortze, of North Carolina, where a dead fœtus, after being retained more than seven years, was found upon *post mortem* examination. And in some European journal, cases are reported of retention in utero, proved by autopsy, as high as fifty years. Such cases as these go far to show that the mother is not much injured by retention. I will now pass to the consideration of this subject.

Cruveilhier relates a case of a young (French) woman who had suffered for four months from uterine hemorrhage, followed by a very offensive, fetid discharge, per vaginam. After this she expelled some small lumps which were mistaken for fibrous tumors but they were parts of a fœtus. Her health was undiminished by hectic fever and she presented all the marks of cancerous cachexia, and yet recovered, contrary to all expectation.

Dr. W. P. Dewees, in his *System of Practice*, narrates the case of a woman who was taken with labor pains about two weeks before the expected time of delivery, and which continued ten hours, then subsided, and she felt the motion of the fœtus no more after that. Her health was impaired and she continued to suffer spells of illness. Two years after first becoming pregnant, she was attacked with pain, cough, vomiting, etc., and suffered on this way a month longer when she died and autopsy discovered a fully developed dead fœtus which, no doubt, was the cause of her sickness and death.

It is contended by some that the mother is not affected so long as the membranes are intact and that putrefaction does not take place until they are ruptured, the liquor amnii discharged and the fœtus subjected to the influence of atmospheric air. The

dead fœtus may cause septicæmia in the mother even when the membranes continue whole, and Dr. Fordyce Barker, of New York, reports cases in proof of this. Dr. McClintock, of Ireland, also says he has seen cases of septicæmia originating from retention of the dead fœtus; also cases of phlegmasia dolens, from the same cause. Dr. Kemper reports a case of a primipara, aged twenty-three years; previous to pregnancy her health was good, though not robust. When about four months advanced in pregnancy, her health began to decline; had a hacking cough; chills and hectic; night sweats; loss of sleep; shortness of breath; diarrhœ; anorexia and general prostration, with copious expectoration. At full term she was delivered by footling presentation, and the child died during the labor. Hemorrhage was apprehended and guarded against. The placenta being retained, upon vaginal examination, a small, round, flattened object was found engaged in the os uteri, which being withdrawn was found to be a dead male fœtus, advanced to the fourth month of development, which had been preserved from putrefaction by the liquor amnii. There was only one placenta, but there were two cords; the one being small and shrivelled, the other full size. It will be borne in mind, that the onset of her severe illness dated from the fourth month of pregnancy. There was no secretion of milk and she gradually recovered her usual health.

I will now proceed to give the cases which came under my observation, both occurring in Grimes county, Texas, since the war.

CASE 1ST.—Mrs. S. C., aged about thirty-three years; married thirteen years, but never conceived till this time, July, 1867; general health good. I was not acquainted with her, and at the request of her husband, I visited her about a month before her expected confinement in order to get acquainted and give some advice about her case. On seeing her clad in the garments of a

non-pregnant woman, and presenting such a slim appearance, I expressed my surprise to the husband and my doubts as to her being pregnant; or at least, that if pregnant, she was not as far advanced as they supposed; but he insisted that they were not in error, and I knew they were persons of more than ordinary intelligence. I knew too, they were both extremely desirous of having an heir, and I fell back on the belief that this solicitude had led to her being self-decieved, and that she had innocently decieved him. In due course of time, agreeable to her calculations, I was summoned to attend her, as she was seized with all the symptoms of parturition. The labor went on slowly, and she made great complaint throughout the process. I observed that there was no more increase in her size since my first visit. The uterus was small, or only the size produced by five months gestation. Although there was no fetor, yet it was soon evident that the child was dead; although she constantly insisted she felt it move; still I could not, though I did not resort to auscultation for sounds of the fœtal heart, in order to decide the question. After about twelve hours, she was delivered of a dead female fœtus, advanced to the fifth month of development. The skin was desquamating everywhere, and some of it had rubbed off the arms, legs and cheeks, and the whole surface presented the appearance of a dead body in the first stage of decomposition, being purplish, greenish and dark slate color. The placenta came away with the fœtus, showing very little sign of decay; the funis was flaccid and shrivelled. There was no secretion of milk and she made a rapid recovery, although her blasted hopes gave her a great shock

I learned then, that at about the fifth month of gestation, she had received a very severe injury by a fall from a table on which she was standing for the purpose of taking down a window curtain. In the fall she struck her abdomen violently on the corner of a Saratoga trunk; there was some hemorrhage following this;

considerable uterine pain and symptoms of imminent abortion, requiring medical interference for their arrest. She came safely through the danger, as they thought, and she imagined she could feel the child move even up to the time of labor.

As said in the outset, her general health was good during pregnancy, except the illness caused by the fall and injury. She carried the dead fœtus about four months, as it is evident it was killed at the time of the injury.

CASE 2ND.—Mrs. E. C., aged twenty-eight years, native of Georgia, mother of one boy aged thirteen years, by another husband; married to her present husband in January, 1874; general health good; only suffers occasionally from carious teeth and neuralgia; catamenia regular up to this pregnancy, in July, 1874. About six weeks after last menstrual visitation, while in the woods with some friends, she was holding down a sapling for some purpose, and she had to exert herself to do it, she "felt something inside of her give away," which caused an uneasy, unpleasant sensation in the hypogastric region and she felt sick and badly next day, suffered from a dull feeling, but no fever, no hemorrhage, and the day after the hurt there was some discharge of mucus from the vagnia, which lasted only that day.

As there was *suppressio mensi* but no enlargement of the abdomen, or of the breasts, or morning sickness, she supposed she had been mistaken and that she was not pregnant, and about the regular time for the appearance of the catamenia, in April following, she had some of the usual symptoms attending their approach, and sent to me for some medicines "to bring her right." She had never consulted me about her case. I sent her a few emmenagogue doses which she used that day and the next. On the night of the 22d April, 1875, she had some pain in the abdomen, but not enough to keep her from sleeping as usual. When she got up on the morning of the 23d of April, she found a "lump of

something, she did not know what," in her bed-gown which she preserved, and sent for me to examine it. She was still in bed, free of fever and felt well. This was nine months from last catamenia. The mass she showed me proved to be a blighted ovum and placenta with the membranes entire. It was not fetid and presented no appearance of decomposition, only the dark, dull hue consequent upon several hours exposure to the air. On laying open the membranes a small amount of fluid, about five or six drachms, escaped and a male fœtus, with arms and legs, without hands or feet, such as is faithfully represented in Ramsbotham's Midwifery and Sprats' plates, portraying an embryo at the sixth or seventh week. She was not sick a day, required no medicine, and I have seen her frequently since in good health.

So far as my information extends, there is as much evidence on one side as the other as to whether retention does, or does not injure the health of the mother.

One subject, however, will claim our attention a short time, which is, the protection of the dead fœtus from putrefaction in utero. Scanzoni explains it as well as any author, and I will transcribe what he says:

"The considerable amount of salts, which the liquor amnii contains in solution, is an important element in preventing decomposition. In abortions occurring in the first few weeks of gestation, no trace of the embryo, or only fragmentary portions, can be found in aborted ova, when the membranes are unruptured, while the thickened and cloudy appearance of the liquor amnii in these cases makes it more than probable that the product of conception has been more or less completely dissolved in the fluid which surrounded it. In the third, fourth, or fifth month, the fœtus looks as though it had been preserved for a long time in a weak saline solution. It is somewhat shrunken, the skin is in folds, the muscles are thicker and harder; the entire

fœtus is in that condition which we designate by the name of 'mummification.' In the last months, the alterations are more marked; the entire cadaver is swollen, all the organs are softened, the skin is discolored and is oftentimes raised in blebs, and may easily be removed in large placques; the subcutaneous cellular tissue and all the cavities of the body are filled with a discolored, bloody, serous fluid; the bones of the head are connected only loosely together, and are readily pushed the one over the other; the umbilical cord is infiltrated with serum, is of a livid bluish-red tint, and softened. These different changes are explained by the varying amount of saline constituents contained in the liquor amnii. The salts diminish in direct relation to the duration of the pregnancy, but at the end of the process the solution is always sufficiently strong to prevent decomposition, unless the membranes are ruptured, and the atmosphere admitted in contact with the parts deprived of vitality."

CASE REPORTED

—BY—

A. E. FORD, M. D.

RETAINED FŒTUS.

Mrs. C., aged thirty years, has had four living children and three miscarriages. With all has had occasion for the services of a physician. She expected to be confined on the 22nd of March, 1876. On the 14th of January, she had a large discharge of water, per vaginam, which continued for several days and left her abdominal circumference much smaller than before. After this, she was able to be up for a little while at a time, but generally, she was obliged to keep her bed, because of the weight and pressure of the gravid uterus. On the 22nd of March, I was called to see her. I found her in laborpains; nausea, etc. She complained of such abdominal tenderness and vaginal soreness, that I could make no satisfactory examination, but I thought I was able to detect the head of the child in the right iliac fossa, its nates looking to the opposite side. No amount of persuasion could induce the patient to allow me to make even a digital examination, for the reason, as she said, that the parts were so extremely tender. But the pains continued, and she finally consented, at the end of forty-eight hours, that I should do something for her relief. I found on examination that the os was fully dilated. The head of the child rested in the right iliac symphysis. I turned the child, and in a short time effected delivery by the vertex, or rather by the neck, for the head was

absolutely absent, its place being supplied by a shrivelled cyst. The remainder of the fœtus was well preserved and developed up to the seventh month, about which time the mother was positive it had perished. There was no fluid discharge whatever from the uterus during delivery. The fœtus, membranes and placenta all came away together. The mother recovered without milk forming and without fever or untoward symptom of any kind.

CASE REPORTED

—BY—

J. W. FENNELL, M. D.

TEDIOUS LABOR IN PRIMIPARA WITH DOUBLE VAGINA.

Was called January, 1876, to visit Mrs. C., German lady, aged about twenty years. She had been in labor nearly four days, with a midwife in attendance. Examination found head above the brim; was in good position, occiput to the left and freely movable. Was informed by the midwife, that two or three times in the preceding twenty-four hours, the head had pressed smartly down on the perineum, but would rise as high as ever again. Seeing she was considerably fatigued, if not becoming exhausted, after trying relaxants; chloroform, chloral, etc., without relief; sent for assistance and instruments. Upon the arrival of Dr. B. W. Humphries, several ineffectual attempts were made to apply the forceps, with failure. We then introduced the vectis, and, to our astonishment, a septum was discovered, forming two vaginæ and two mouths to the uterus. The head was resting heavily against the septum. The passages were exactly similar in every respect, and it was clearly impossible to deliver the child through either. Neither the forceps, version, nor craniotomy was available, and the cæsarian section could hardly be justified, where there were no signs of the child being alive. After consultation, we decided to divide the septum, although we could recollect no authority for it. The head was pushed back; two fingers passed between it and the septum, a curved, probe-

pointed bistoury, carefully guarded, was used, and the septum divided about an inch. A few pains brought the head against the septum, when about another inch was cut, and so on, until the septum was cut through, and the child was expelled by the natural efforts. The hemorrhage from the cutting was only a few ounces, and the woman recovered without any bad symptoms. The child, apparently dead, was revived after long efforts, but died the next day.

The septum was placed antero-posteriorly, commencing at the arch of the pubis, passing down to the fourchette with a free edge, flush with the labia minora, and attached to the perineum, the walls of the vagina, and the lips of the os uteri, holding the latter, nearly, in contact. It was about one and a half or two inches wide. Its free border in front was almost a feather edge. Higher up, it was of uniform thickness, about one line and a half in the centre, growing thicker each way to its junction with the vaginal walls. Under the knife, it cut fibrous. The part between the lips of the uterus was one inch and a half wide.

Meteorological Observations at Galveston, Texas.

For Week Ending	Bar. Mean	Thermometer Mean	Max.	Min.	Humidity Mean	Wind Direc.	Velocity	Rainfall Total.
April 8, 1875.	30.071	65.6	78	55	71.4	S. E.	14	.07 in's.
15,	30.069	64.4	76	53	61·2	S. S. W.	13	.09
22,	30.041	66.5	78	53	72.5	S.	13	2.28
29,	29 988	65.5	79	58	70,9	S . E.	13	.05
May 6, 1875,	29.889	72.8	88	62	70.8	S. E.	11	.08
13,	29,969	76.3	86	70	72.5	S. E.	10	.06
20,	30.063	76.7	90	70	64.9	S. E.	7	.00
27,	29.911	78.7	89	66	71.8	S· E.	8	1.36
June 3, 1875.	30.000	81.5	92	73	73.4	S. E.	8	.00
10,	30 037	80.4	92	69	69.2	S. E.	8	.79
17,	30.083	83.4	95	75	65.8	S. S. E.	8	.00
24.	30.027	85.6	97	79	65.9	S. E.	9	.07
July 1, 1875.	30.077	85.1	95	77	67.2	S. E.	9	.26
8,	30.060	85.4	97	78	66.0	S. E.	8	.18
15,	30.054	85.1	98	80	64.3	S.	9	·20
22,	30.004	86.0	98	81	65 5	S,	9	.00
29.	30.078	85.8	97	80	65.9	S. E.	10	2.82
Aug. 5, 1875.	30.043	85.6	96	78	65.4	S· E.	9	.00
12.	29.960	83 0	94	71	73.1	S, W.	9	3.47
19.	29.952	82.7	92	74	74.6	S. S. W.	10	1.11
26,	30.050	80.5	89	72	76.1	S. E.	7	1.57
Sept. 2, 1875.	29.999	84.3	94	77	68.3	S. E.	6	.58
9,	30.045	84.5	94	76	70.0	S. S. E.	6	.36
16,	29.923	80.9	97	75	78.1	N. E.	18	8.84
23,	29.926	69.8	87	59	71.3	N. N. E.	16	2.00
30,	30.028	69.5	80	61	70.0	N.	14	6.63
Oct. 7, 1875·	30.093	73.3	84	65	82.2	N. E.	18	.15
14,	30.073	72.4	83	68	75.2	E.	7	.06
21,	30.154	66.3	78	56	60.5	N. E.	12	.64
28.	30.025	71.7	81	61	78.6	E. S, E.	8	.27
Nov. 4, 1875.	30.036	73.5	82	63	73.9	S.	10	.10
11,	30.038	58.3	69	50	78.3	N. N. E	17	92
18,	29.997	67.8	77	49	78.2	S. S. W.	12	.08
25,	30.074	69.0	78	58	93.0	S. E.	9	1.84
Dec. 2, 1875.	30.004	61.7	73	47	92.4	N. N. E.	13	2.83
9,	29.953	56.1	70	40	71.7	N. W.	18	2.17
16,	35.107	61.7	73	52	73.6	S. S. W.	8	.50
23,	30.167	62.0	72	48	81.5	S. E.	10	6 41
30,	29.930	66·2	73	56	92.2	S. S. E	7	.52
Jan. 6, 1876.	30.199	61.4	73	55	73.9	E.	8	.17
13,	30 326	56.5	73	45	66.7	N. E·	13	.25
20,	30.159	61.0	72	47	74.1	E. S E.	11	.85
27,	30.114	66.7	74	35	87.4	S. E.	8	.00
Feb. 3, 1876.	30.161	57.1	74	35	68.5	N. N.E.	14	.72
10.	30.236	60.3	74	41	78.7	E. S. E.	9	.09
17,	30,094	62 7	74	52	71.2	S. S. E.	10	1 45
24,	30.207	56.1	72	43	81.3	E	14	2.85
Mar. 2, 1876.	30.093	64.1	76	55	76 2	E. S. E.	10	.11
9,	30.069	63.1	76	50	88.6	S. E.	10	.62
16,	29.988	61.6	75	45	72.3	E. S. E.	12	1.85
23,	30.092	56.0	70	36	67.1	E. S. E.	15	2.24
30.	29.924	61.5	73	45	69 7	N. N. W	13	1.01

WAR DEPARTMENT, Signal Service, U. S. A.

(*Division of Telegrams and Reports for the Benefit of Commerce and Agriculture.*)

Table showing daily and monthly means of Barometer and Thermometer, monthly velocity of wind, and amount of rainfall, with the prevailing direction of wind, etc., for the month of September, 1875:

Highest barometer, 30.167 at 6:24 A. M., the 10th; lowest barometer, 29.038 at 2 P. M, 17th; monthly range of barometer, 1-129; highest temperature, 94°. on the 9th; lowest temperature, 59°. on the 18th, monthly range of temperature, 35°.; greatest daily range of temperature, 14°.; mean of maximum temperatures, 85.7°.; mean of minimum temperatures, 71.6°.; mean daily range of temperatures, 10.5°.; total rainfall, or melted snow, 18.41 inches; prevailing wind, E S. E.; total number of miles traveled, 9,390; maximum velocity of wind, 60 miles at 4:30 P. M.. on the 17th; number of cloudy days, other than those on which rain fell, 1; number of days on which rain or snow fell, 10; number of auroras, none; number of solar halos, on the 14th, at 11 A. M.; number of lunar halos, none,

ROBERT REEDER, Observer, Galveston, Texas.

Report of Deaths in the City of Galveston, from April 1, 1875, *to March* 31, 1876.

CAUSES OF DEATHS.	April 1875.	May.	June.	July.	August.	September.	October.	November.	December.	January 1876.	February.	March.	TOTALS.
Abscess of Brain											1	1	2
" of Liver		1		1					1				3
Albuminuria		2											2
Aneurism of Aorta									2		1		3
Atrophia					1								1
Apoplexy	1			1		2	1	1			2	3	11
Asthma		1	1		1					1			4
Bronchitis	1	1				1						1	4
Burns and Scalds			1		1	1							3
Bright's Disease			1	2			1		1				5
Cancer	1		1		1			1	1		1	1	7
" of Stomach				1									1
Catarrh					1				1			1	3
Cholera Infantum			4	2	1	1	1		1		1		11
Cirrhosis of Liver							1						1
Compression of the Brain									1	1	1		3
Congestion	1			1	5	1	2	2		2		3	17
" of the Brain				2	2	1	5	2	1	1			14
" of the Liver					1								1
" of the Lungs	1						1			1		1	4
Consumption	1	7	2	4	3	4	6	4	4	5	3		46
Convulsions	2	1	3	4	2	2		7	7				28
" Adult												1	1
" Infantile					1					2	4	5	12
Cyanosis												1	1
Croup		1			1					1			3
Debility		2	5		2	2	3		3	2			19
" Adult				1				1				1	3
" Infantile				1					3	3			7
Diarrhœa			3	1	1			1	1				7
" Chronic									1				1
Dropsy	2		1	1	3		3	2				1	13
Drowned						10					1		11
Dysentery		2		2	2	2	1		1	1			11
" Acute									1				1
" Chhronic	1			1			1						3

Report of Deaths in the City of Galveston—Continued.

CAUSES OF DEATHS.	April, 1875.	May.	June.	July.	August.	September.	October.	November.	December.	January 1876.	February.	March.	TOTALS.
Diptheria												1	1
Dyspepsia						1				1	1	1	4
Enlargement of Liver							1						1
Epilepsy										1		1	2
Entero-Colitis	1			2	1		1	1	1	1			8
Erysipelas		2											2
Fever							2						2
" Bilious			1		2		2					1	6
" Congestive				2		3			1				6
" Puerperal						2	1			1		1	5
" Remittent			1		2	1							4
" Scarlet									1				1
" Malarial				1	2			1					4
" Typhoid			2			2	2		1		1		8
" Typhus											1		1
Fracture					1								1
" of Leg			1		1								2
Gangrene							1						1
" of Lungs												1	1
Gastro Enteritis			1	1		2	2		2	3			11
Hemorrhage		1						1	1				3
" from Lungs	1						1						3
" from Stomach					1								1
Heart, Disease of			1	1	1	1	1	1	2	1	3	2	14
Hydrocephalus									1	1	1		3
Hooping Cough					2				1		1		4
Inflammation			1	1	1			1	1				5
" of the Bowels		3	3	2	3	4		5	4	1	1	1	27
" of the Brain	1	1	1									1	4
" of the Liver				2		1			2		1		6
" of the Stomach							1						1
" of the Tonsils											1		1
" of the Womb											1		1
Infanticide		1											1
Inanition	1	3	1	1	1		2	2	1	1	1		14
Injuries	1			2			2			1			6

Report of Deaths in the City of Galveston—Continued.

CAUSES OF DEATHS.	April, 1875.	May.	June.	July.	August.	September.	October.	November.	December.	January 1876.	February.	March.	TOTALS.
Intemperance									1	1	1		3
Intusussception of Intestine											1	1	2
Labor, Difficult					1								1
Lockjaw	2	1	3	7	2			1	1	1	2	2	28
Marasmus, Adult		2	4		2								8
" Infantile				1				3		1		1	6
Meningitis		3			1			1			1	1	7
" Cerebro Spinal		1	1	1									3
Old Age	1	1					2	1	1	2	1		9
Paralysis									1				1
Peritonitis					1							1	2
Pneumonia	2	1		1				2	1	2	2	1	12
Paraplegia			1										1
Poison			1		1				2	1			5
Premature Birth									2			1	3
Pyemia		1											1
Rheumatism			1			1							2
Scrofula		1											1
Softening of the Brain	1												1
" of the Spinal Cord									1				1
Spine, Disease of								1					1
Syphilis	1												1
Suicide		1					3						4
Sun Stroke				1									1
Teething		1	2	8	3	1			3		1		19
Tris. Nascentium		1		1	2	1	2	2				1	10
Tabes Mesenterica									1			1	2
Tumor								1					1
Uræmia			1					1					2
Ulceration				1									1
" of the Bowels		1						1					2
" of the Throat									1				1
Unknown	4		2	1	2	4		2	4	3		1	23
Wounds												1	1
" Gunshot				2						2	1		5
Not Stated or Ill Defined	2	3	2	3				3	1	1			15
Still-born	3	2	3	4	5	6	8	8	3	6	7	1	56

Showing the Total Number of Males Females and not Stated, Died at Galveston, Dnring Each Month, from April 1, 1875 *to March* 31, 1876.

MONTH.	MALES.	FEMALES.	NOT STATED	TOTAL.
April, 1875. - - -	23	8	1	32
May. - - - - - -	24	23	2	49
June. - - - - - -	36	19	1	56
July. - - - - - -	42	28	1	71
August. - - - - - -	35	29	3	67
September. - - -	37	21	3	61
October. - - - - -	38	21	4	63
November. - - - -	36	20	3	59
December. - - - -	35	28	6	69
January, 1876. - -	30	19	3	52
February. - - - -	27	14	4	45
March. - - - - - -	21	19	6	46
TOTALS. - - -	384	249	37	670

Showing the Total Number of White, Colored and not Stated. Died at Galveston, During Each Month, from April 1, 1875, *to March* 31, 1876.

MONTH.	WHITE.	COLORED.	NOT STATED	TOTALS.
April, 1875.....	19	10	3	32
May.....	40	9	0	49
June.....	42	10	4	56
July.....	56	12	3	71
August.	47	15	5	67
September.....	43	13	5	61
October.....	47	11	5	63
November.....	41	13	5	59
December.....	45	17	7	69
January, 1876.....	40	7	5	52
February.....	33	7	5	45
March.....	33	10	3	46
TOTALS.....	486	134	50	670

Showing the Nativity of Each Person Died at Galveston, During Each Month, from April 1, 1875, *to March* 31, 1876.

NATIVITY.	April, 1875.	May.	June.	July.	August.	September.	October.	November.	December.	January 1876.	February.	March.	TOTALS.
Africa	1		1	2	1		1						6
Austria						1						1	2
Belgium									1				1
Denmark						1							1
England	1			2	3		1	3	2		2	2	16
Findland					1								1
France		2	4	3		1		1		4			15
Germany	4	5	4	3	5	8	1		4	2	3	2	42
Greece											1		1
Holland					1								1
Ireland	1		2	1	4	1	5	5	7	5	3	2	36
Italy			1				1			1			3
Mexico		1						1		1			3
Newfoundland					1								1
Prussia					1	1				1			3
Russia									1				1
Spain					1		1						2
Sweden		1				1							2
United States	17	35	38	45	39	27	37	42	43	33	34	36	426
West Indies												1	1
Unknown	8	4	4	12	8	18	4	2		5			65
Not Stated		1	2	2	2	2	12	5	11		2	2	41
TOTALS	32	49	56	71	67	61	63	59	69	52	45	46	670

Showing the Average Age of Each person Died at Galveston, During Each Month, from April 1, 1875, *to March* 31, 1876.

AGES.	April, 1875.	May.	June.	July.	August.	September.	October.	November.	December.	January 1876.	February.	March.	TOTALS.
Under 1 Year	9	22	23	29	19	13	17	33	25	15	21	12	238
1 to 2 "	1	...	3	8	8	3	4	2	5	3	2	3	42
2 to 5 "	...	4	2	...	6	2	1	2	1	4	2	3	27
5 to 10 "	1	2	2	1	2	1	4	...	4	3	..	...	20
10 to 15 "	...	2	...	1	1	...	1	...	...	...	2	...	7
15 to 20 "	2	...	3	1	1	...	3	3	1	...	...	2	14
20 to 25 "	...	4	...	1	3	7	3	...	3	...	3	2	26
25 to 30 "	4	3	2	1	2	...	2	3	6	...	3	4	30
30 to 40 "	3	8	5	11	5	7	6	2	7	4	5	6	69
40 to 50 "	1	2	1	4	8	4	9	5	5	6	...	4	49
50 to 60 "	5	...	2	3	1	3	2	2	...	2	2	1	23
60 to 70 "	...	1	3	4	5	1	3	2	...	5	2	2	28
70 to 80 "	...	1	2	2	4	2	...	...	3	...	1	1	16
80 to 90 "	...	...	...	...	...	...	1	1	...	1	1	2	6
90 to 100	...	...	...	1	...	...	...	...	...	1	...	1	3
100 and Upwards	1	...	...	...	...	...	...	...	...	...	...	...	1
Unkown	5	...	8	4	2	18	7	4	9	8	1	3	69
TOTALS	32	49	56	71	67	61	63	59	69	52	45	46	670

Rain Fall in Wallace Prairie. Grimes County, from January 1, 1875, *to March* 24. 1876. (*Reported by Gwyn Morrtson, Esq., and Furnished to the Association by Dr. A. R. Kilpatrick*).

1875	INCHES.	DECIMALS.	1876	INCHES.	DECIMAL
January	1	94	January	5	40
February	4	23	February		91
March	1	45			
April	3	99	March		
May	4	89	" 4		16
June	2	30	" 6	2	15
July		99	" 11		70
August	2	05	" 14		95
September	11	96	" 19	2	01
October	2	34	" 23		01
November	2	22	" 24		68
December	14	66			
TOTAL	53	.02		12	.97

The past winter, 1875--6, has been remarkably mild. Many days in mid-winter it was not cold enough to require fires for families. In March, 1876, there has been more continued regular cool weather, requiring fires, than any other month. March 20th, thermometer was at 30°; ice and a very white frost. Frost on the 29th, thermometer 36°. 30° is the lowest for all the winter. April 2, 1875, white frost. April 12, 1875, white frost.

IN MEMORIAM.

Died at Dresden, Texas, February 12th, 1876, PROF. JAS. M. CALLAWAY, M. D., of Galveston, in the forty-sixth year of his age.

Dr. Callaway graduated in the Medical Department of the University of Louisiana, in March, 1854, and commenced the practice of medicine in the northern portion of that State, the following summer. His high professional attainments, in conjunction with his kind and gentlemanly deportment, soon won for him, many warm and devoted friends, and the esteem and confidence of the community in which he lived. After the close of the late war, much regretted by his former patrons and associates, he moved to Texas, and settled on the bay, between Houston and Galveston, where he practiced, with eminent success, the various branches of his profession until 1869, when he located permanently at Galveston.

In this new field of labor, Dr. Callaway was not long a stranger; his ability as a physician, his warm and generous nature, soon brought him into prominent notice, and he was elected to the chair of Physiology in the Galveston Medical College, at the commencement of the session of 1870–71. In this capacity, he served three years, and gave infinite satisfaction, both to his confreres and pupils. He was elected to the chair of Obstetrics in the same institution, 1874, in which position he sustained his well earned reputation until death claimed him for one of its victims. As a gynæcologist, he had but few superiors in the South.

In the death of Dr. Callaway, the profession has lost one of its brightest lights, science, one of her most devoted votaries, and humanity, an earnest and untiring benefactor. His untimely end has drawn the pall of mourning over a host of warm and admiring friends. Peace be to his ashes.

RICHARD BIBB, M. D.

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—OF THE—

TEXAS STATE MEDICAL ASSOCIATION.

PUBLISHED, AS PER INSTRUCTIONS, PAGES TWENTY AND TWENTY-ONE OF MINUTES.

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Baylor, J N	Navasota,	Grimes.
Beall, E J	Fort Worth,	Tarrant.
Becker, E	Frelsburg,	Colorado.
Bowers, S	Burton,	Washington.
Bayles, T J	Houston,	Harris.
Bayne S M	Gatesville,	Coryell.
Beall, W P	Lampasas,	Lampasas.
Beck, H H	Sulphur Springs,	Hopkins.
Brown, H W	Waco,	McLennan.
Bruce, L M	Masterville,	McLennan.
Brown, A P	Jefferson,	Marion.
Burroughs, J J	Houston,	Harris.
Blocker, C M	Jonesville,	Harrison.
Blocker, E B	Marshall,	Harrison.
Bibb, R H L	Austin,	Travis.
Bell, W H	Farmersville,	Collin.
Burroughs, S R	Guy's Store,	Leon.
Brooke, Chas	Marshall,	Harrison.
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DeJernett, R	Jefferson,	Marion.
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Eads, B F	Marshall,	Harrison.
Ellett, A W	Jonesville,	Harrison.
Fort, J M	Paris,	Lamar.
Flewellyn, R F	Houston,	Harris.
Fears, Wm P	Wonders,	Nacogdoches.
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Horney, Wm T	Austin	Travis.
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Johnson, E P M	Marshall,	Harrison.
Johnson, A A	Dallas,	Dallas.
Jones, E	Tyler,	Smith.

Jose, W P	Hallville,	Harrison.
Jones, W D	Waxahachie,	Ellis.
Kattonan, J	Houston,	Harris.
Larendon, J	Houston,	Harris.
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Leake, H K	Dallas,	Dallas.
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McGregor, G C	Waco,	McLennan.
Millikin, W C	Weatherford,	Parker.
Morris, W A	Austin,	Travis.
McLaughlin, J W	Austin,	Travis.
McCreary, E R W	Lindale,	Smith.
Manning, T D	Waco,	McLennan.
Moody, M W	Cotton Plant,	Lamar.
Marks, T M	Marshall,	Harrison.
Mathews, J A	Kosse,	Limestone.
Norris, J T	Brenham,	Washington.
Nicholson, E G	Hamilton,	Hamilton.
Owens, S A	Waco,	McLennan.
Oliver, M H	Ennis,	Ellis.
Pope, J H	Marshall,	Harrison.
Poindexter, J K	Kosse,	Limestone.
Park, W H	Tyler,	Smith.
Palmer, Eugene	Houston,	Harris.
Powell, B	Houston,	Harris.
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Swearingen, R M	Austin,	Travis.
St. Clair, J G	Austin,	Travis.
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Taylor, M A	Austin,	Travis.
Taylor, John R	Kosse,	Limestone.
Trueheart, C W	Galveston,	Galveston.
Tutwiler, H A	Flatonio,	Fayette.
Thorpe, H H	Liberty Hill,	Williamson.
Tobin, W H	Austin,	Travis
Terhune, A A	Jefferson,	Marion.
Underwood, T E	Waco,	McLennan.
Vaughn, S F	Jonesville,	Harrison.
Wallace, D R	Austin,	Travis.
Willis, J M	Waco,	McLennan.
Willis, J S	Waco.	McLennan.
Wilkes, W H	Waco,	McLennan.
White, J W	Waco,	McLennan.
Wells, F W	Millican,	Brazos.
Wiley, T W	Dallas,	Dallas.
Wooten, T D	Austin,	Travis.
Watkins, R A	Corsicana,	Navarro.
Wortham, F M	Pennington,	Trinity.

Total number of members who have paid their dues up to last meeting, one hundred and forty-seven.

There are on the Treasurer's books the names of one hundred and eighty-six members and twenty county and city Medical Associations.

TRANSACTIONS

OF THE

TEXAS STATE MEDICAL ASSOCIATION.

Ninth Annual Session—1877.

Held in the City of Galveston, April 3, 4, 5, and 6.

MARSHALL:
BROS., BOOK AND JOB PRINTERS, AND BLANK BOOK MANUFACTURERS.
1877.

OFFICERS, 1877-78.

PRESIDENT.

W. D. Kelley, M. D.....Galveston

VICE PRESIDENTS.

Geo. Cupples, M. D.....San Antonio

R. M. Swearingen, M. D.....Austin

J. H. Sears, M. D.....Waco

SECRETARY.

W. A. East, M. D.....Hallettsville

TREASURER.

J. Larendon, M. D.....Houston

JUDICIAL COUNCIL.

Dr. J. B. Robertson.
" C. Campbell.
" S. M. Welch.
" H. W. Brown.
" R. H. Harrison.
" T. M. Marks.
" A. E. Carothers.
" D. F. Stuart.
" J. M. Ross.
" J. C. B. Renfro.

Dr. Ashbell Smith,
" George Cupples,
" B. F. Eads.
" L. E. Locke.
" F. W Holland.
" J. W. Fennell.
" A. C. Walker.
" F. E. Hughes.
" A. B. DeLoach.
" A. G. Clopton.

Dr. T. S. Burke.

SECTIONS.

PRACTICE OF MEDICINE AND MATERIA MEDICA.

Dr. T. J. Heard, Chairman.....Galveston
Dr. C. H. Wilkinson, Secretary.....Galveston

OBSTETRICS AND DISEASES OF WOMEN AND CHILDREN.

Dr. Ferdinand Herff, Chairman.....San Antonio
Dr. A. N. Denton, Secretary.....San Marcos

SURGERY AND ANATOMY.

Dr. T. D. Wooten, Chairman.....Austin
Dr. T. D. Manning, Secretary.....Austin

MEDICAL JURISPRUDENCE, CHEMISTRY AND PSYCHOLOGY.

Dr. Charles Ganahl, Chairman.....Galveston
Dr. S. R. Burroughs, Secretary.....Galveston

STATE MEDICINE AND PUBLIC HYGIENE.

Dr. A. R. Kilpatrick, Chairman.....Navasota
Dr. Jo. S. Willis, Secretary.....Waco

ERRATA.

Page 81, line 7 from bottom, for Parget, read Paget.
Page 94, line 5 from bottom, for Brividisi, read Brindisi.
Page 96, line 13 from bottom, for Laucisci, read Lancisci.

COMMITTEES.

ON PUBLICATION.

Dr. John H. Pope, Chairman.....Marshall
Dr. E. P. M. Johnson.....Marshall
Dr. E. B. Blocker.....Marshall
Dr. S. F. Vaughan.....Jonesville
Dr. A. B. DeLoach.....Longview

ON PRIZE ESSAY.

Dr. S. Eagon, Chairman.....Sherman
Dr. S. D. Thruston.....Dallas
Dr. J. S. Carrington.....Dallas
Dr. Walton.....Dallas
Dr. John H. Pope.....Marshall

ON CLIMATOLOGY AND EPIDEMICS.

Dr. J. H. Sears, Chairman.....Waco
Dr. D. R. Wallace.....Austin
Dr. C. H. Wilkinson.....Galveston
Dr. T. M. Marks.....Marshall
Dr. F. Herff.....San Antonio

COMMITTEE OF ARRANGEMENTS AND INVITATIONS.

Dr. F. Herff, Chairman.....San Antonio
Dr. T. M. Blakemore.....San Marcos
Dr. A. N. Denton.....San Marcos

ON NECROLOGY.

Dr. T. J. Heard, Chairman.....Galveston
Dr. J. B. Robertson.....Washington Co.
Dr. D. R. Wallace.....Austin
Dr. T. Flewellen.....Houston
Dr. J. H. Sears.....Waco
Dr. R. H. Jones.....Dallas
Dr. J. H. Webb.....Bryan
Dr. W. C. McGown.....Austin
Dr. Ashbell Smith.....Harris Co
Dr. J. N. Baylor.....Navasota
Dr. W. C. Blanchette.....Round Top
Dr. J. S. Cunningham.....Hempstead
Dr. O. H. Seeds.....Columbia
Dr. J. L. Irion.....Montgomery
Dr. J. D. Rankin.....Calvert
Dr. J. M. Morrison.....Hearne
Dr. Thos. W. Wiley.....McKinney
Dr. Jno. H. Pope.....Marshall
Dr. Hillary Ryan.....Caldwell
Dr. D. A. Shuford.....Tyler
Dr. Geo. Cupples.....San Antonio

ESSAYIST.

Dr. T. D. Manning.....Austin
Dr. J. F. Y. Paine, Alternate.....Galveston

TIME AND PLACE OF NEXT MEETING.

First Tuesday in April, 1878.....San Antonio

DELEGATES

TO THE AMERICAN MEDICAL ASSOCIATION.

Dr. E. B. Blocker.....Marshall
Dr. A. E. Carothers.....Austin
Dr. S. M. Welch.....Galveston
Dr. J. J. Burroughs.....Houston
Dr. H. K. Leake.....Dallas
Dr. J. Larendon.....Houston
Dr. J. H. Sears.....Waco
Dr. W. A. East.....Hallettsville
Dr. E. J. Beall.....Fort Worth
Dr. A. N. Denton.....San Marcos
Dr. T. S. Burke.....Corpus Christi
Dr. A. G. Clopton.....Jefferson
Dr. S. Eagon.....Sherman
Dr. M. A. Taylor.....Austin
Dr. O. H. Seeds.....Columbia
Dr. R. W. McCutchen.....Gladewater
Dr. J. F. Hooks.....Paris

ALTERNATES.

Dr. F. H. Johnson.....Marshall
Dr. E. T. Dale.....Texarkana
Dr. Thos. Colley.....Palestine
Dr. J. C. B. Renfro.....LaGrange
Dr. McKenzie Johnson.....Galveston
Dr. F. M. Hall.....Bryan
Dr. T. W. Wiley.....McKinney

The Texas State Medical Association, although formally accepting and publishing the reports of the various standing committees, holds itself wholly irresponsible for the opinions, theories, or criticisms therein contained, except when otherwise decided by special resolution.

MINUTES.

FIRST DAY—MORNING SESSION.

ARTILLERY HALL, GALVESTON, TEXAS,
Tuesday, April 3, 1877.

The Convention was called to order by the President, Dr. R. H. Harrison.

The roll was called by the Secretary, and a quorum being present, the President said the hour for the work of the Convention had arrived, and it was right that the proceedings of an Association whose objects were the amelioration of human suffering, should be opened with prayer.

Rev. Dr. R. F. Bunting was introduced, and, in a fervent prayer, invoked the Divine guidance upon the deliberations of the Convention.

Dr. Greensville Dowell, Chairman of the Committee of Arrangements and Invitations, delivered the following address of welcome:

Mr. President and Gentlemen of the State Medical Association:

It becomes my pleasing duty to welcome you to Galveston, and in the name of the medical profession and citizens of this city, we welcome you all; and that your stay may be pleasant and profitable to you, we have prepared a programme so you may divide your time between business and

pleasure. As Galvestonians we are proud of our city, which is now in its forty-first year, and has 40,000 (estimated) inhabitants. It is situated on a beautiful island, between gulf and bay; and from the top of our new Tremont hotel you can see all over our city, and view ships sailing many miles out at sea. We have a beach of thirty miles, that on the wettest, dryest or windiest day can be ridden or driven over without mud or dust. We have three railroads running out of the city to all parts of the United States, and ships sailing to all parts of the world. We have wealthy and enterprising merchants and bankers; many very able and distinguished lawyers; wise and prudent physicians; able and devout ministers; large and beautiful churches, and, what is better, large and intelligent congregations. Of newspapers I believe we have three or four—the best in the State, if not equal to any in the United States. The health of our city is equal to any in the world, and still improving. Twelve years ago we had thirty-six physicians and 13,000 inhabitants; now we have not so many physicians, and 40,000 inhabitants, and it is our daily remark we have not so much to do as then. Our city has been drained and low places filled up, and the city kept so clean we have had no epidemic of yellow fever for ten years, and when it has prevailed in our country towns the citizens have fled here for protection. We have no chills or fevers, as in many other parts of the South, and no endemic disease on our island. I have thus hastily spoken of what we are, but let us see what we will be. It is no stretch of the imagination to say the State of Texas will hold and support 40,000,000 of people and not be as thickly inhabited as France or Belgium. That Galveston will be as large as New York is now, and railroads will carry coffee and sugar from here to Alaska by our projected railroads, almost on a straight line, and bring gold and silver from those distant regions. We will have others going to the City of Mexico and the Pacific ocean. We certainly have a bright future before us.

What shall we say to you as physicians? It was with no little pride we heard, at the various associations we attended last summer, our State eulogized for her efforts to establish a State Board of Health; a law regulating the practice of medicine, and the establishing of a Medical College where the professors are elected by the concour or competitive system; asylums for the insane, the blind and the deaf; for these we are equal with the oldest of the States, yet we need schools for feeble-minded children, asylums for the care and cure of inebriates, which will devolve on this Association to assist in organizing and putting into operation.

To consume no more time, we hope we may have a harmonious session, and be the means of doing much towards the advancing of our noble and honorable profession. We again bid you welcome.

The President returned the thanks of the Association for the welcome extended by the Galveston Medical Society.

An invitation from the ladies of the Baptist church to attend a banquet at Turner Hall was, on motion, accepted.

Roll of Censors called. Present—Drs. Wooten, Burroughs and Carothers. Absent—Drs. Clopton and Starley. The President appointed Drs. Holland and Rogers to fill the places of absent members.

The Secretary read the list of standing committees appointed at the last meeting of the Association, and stated that there was some irregularity in the appointment of delegates to the International Medical Congress which could not be remedied for want of time.

The President said that an apology was due the gentlemen who had suffered from the changes; that if any body was at fault it was himself.

Dr. Ashbel Smith said he would ask the Association to take some action to prevent, in the future, anything like a clash or conflict in the deliberations of the body. Said he was nominated at the last session as a delegate to the International Convention. He declined, but was urged by members of the Convention, and finally consented. Thought the erasure of his name and the substitution of another gentleman was hardly just to him; but he had no complaints to make, and hoped that the example would prove a warning in the future government of the organization.

The President said, in making the erasure of Dr. Smith's name, he was actuated by the conviction that it would be acceptable to him, inasmuch as he had manifested a great disinclination to attend the International Convention when he was first appointed.

The Board of Censors announced ready to report, and recommended the following gentlemen for permanent membership: George A. Wise, M. D., Galveston; Cecil W. LeGrand, M. D., Washington county; A. R. Kilpatrick, M. D., Navasota; Samuel W. McJunkin, M. D., Galveston; A. W. Fly, M. D., Galveston; James S. Bailey, M. D., Albany, New York; George

W. Christian, M. D., Weimer; H. H. Darr, M. D., Hearne; H. C. Ghent, M. D., Belton; M. K. Lott, M. D., Belton; R. P. Talley, M. D., Belton; W. Barton, M. D., Salado; L. J. Russell, M. D., Harrisville; J. F. Y. Paine, M. D. Galveston; J. M. McKnight, M. D., Seguin; W. F. Blunt, M. D., Galveston; R. C. Nettles, M. D., Marlin; William Penny, M. D., Galveston.

Report, on motion, received and adopted, and the gentlemen enrolled their names on the Secretary's book.

On motion, the old rules, enforced before the adoption of the new constitution, were adopted for the government of the Convention.

Dr. Kelly gave notice of an invitation, extended by the Military Battalion, to attend their pic-nic, on the narrow gauge railroad.

Motion to adjourn until 2:30 o'clock, P.M. Carried.

AFTERNOON SESSION.

Association called to order by the President.

Roll Called.

Minutes of morning session were, on motion, omitted.

Dr. Robertson moved that representatives of the press be invited to take seats in the Association. Carried.

The Secretary stated that there had been placed upon his table, by the Committee of Arrangements and Invitations, letters from medical gentlemen in different sections, regretting their inability to attend the Convention. On motion, the letters were read. Among them were letters from Dr. J. Cochrane, of Mobile, Ala.; Dr. R. Kinloch, of Charleston, S. C.; Dr. Paul F. Eve, of

Nashville, Tenn.; Dr. Stanford E. Chaille, of New Orleans; Dr. Rob. Battey, of Rome, Ga.; Dr. S. D. Gross, of Philadelphia; Dr. George W. Lawrence, of Hot Springs, Ark.; Dr. S. M. Bemiss, of New Orleans; Dr. G. Thomas, of Savannah, Ga.; Dr. E. S. Gaillard, of Louisville, Ky.; Dr. T. G. Richardson, of New Orleans; Dr. C. H. Mastin, of Mobile, Ala., and one from Dr. J. W. Douglass, of Palestine, Texas. This last letter raised a question under the code of ethics, and on motion of Dr. Dowell was referred to the Board of Censors.

Dr. Burroughs, Chairman of the Board of Censors, presented the application of Dr. Dial, of Marshall, Texas, and reported, approving the application upon recommendations accompanying it.

Dr. Pope objected to receiving Dr. Dial, and moved that the application and recommendations be referred to a special committee of three.

Dr. Cupples offered as an amendment to Dr. Pope's motion that with the consent of parties endorsing, to refer the application to a committee of three.

Dr. Wooten, in behalf of the Board of Censors, stated that he could not go behind the endorsers of the application.

Dr. Pope disclaimed any reflection on the Board of Censors, but said he would be compelled to resist the reception of the applicant.

Dr. Ashbel Smith moved, as an amendment to the amendment of Dr. Cupples, that the report be recommitted to the Board of Censors. Carried.

Dr. Robertson rose to a point of order, alleging that no report touching the authenticity of the delegates had been passed upon, and he thought that the evil complained of could be cured by having the credentials of members acted upon by the Board of Censors.

Dr. Burroughs, from the Board of Censors, replied by saying that his committee was at work, and would meet the objection raised as soon as possible.

Dr. Robertson moved that the Association proceed to organize in conformity with parliamentary customs. Carried.

The President called for the report ordered from the Committee on Organization at the last meeting.

One of the committee announced that the report had not been completed, and asked that the committee be allowed to report at some time during the session. Time allowed.

The Committee on the Science and Progress of Medicine asked for further time.

The Committee on Surgery reported progress through Dr. Carothers, Chairman. He asked for more time, and promised to read a paper on the subject before the adjournment of the session. Other gentlemen of the committee stated that the foundation of a most valuable statistical work had been laid, and in the course of another year, the committee would be able to complete the work intrusted to it. Motion made and carried to continue the committee.

Committee on Obstetrics. No report.

Committee on Diseases of Women. No report.

Committee on Diseases of Children. Dr. Renfro, of the committee, asked for further time. Granted.

Committee on Record of Cases not ready. Further time allowed.

Committee on Climatology and Epidemics reported through Dr. Palmer, Chairman. Report received, and referred to the Publishing Committee.

Dr. J. J. Burroughs, Chairman of the Board of Censors, reported the following gentlemen for permanent membership: A. B. Deloach, M. D., of Longview; R. B. Fancher, M D., of

Calvert; Rev. A. Blum, M. D., of Galveston; Thomas M. Colley, M. D., of Palestine, and E. L. Thompson, M. D., of Chappell Hill.

The following Medical Societies having forwarded delegates, the same were reported by Dr. Burroughs, Chairman of the Board of Censors, and recommended to the Association:

Drs. George A. Wise and A. M. Fly, representing the Faculty of the Texas Medical College and Hospital.

Drs. W. A. Morris, B. E. Hadra, W. J. Burt, A. E. Carothers, R. M. Swearingen, J. W. McLaughlin, M. A. Taylor, J. W. Stalnaker and L. S. Rayfield. Alternates, Drs. J. M. Litten, T. D. Manning, S. G. Haynie, J. B. Adair, J. B. Shepherd and H. S. Grant, representing Travis County Medical Society.

Dr. J. C. B. Renfro, representing the Fayette County Medical Society.

Also a list of the regular members of Fayette County Medical Society, to-wit: Drs. W. G. Blanchette, Round Top; R. A. Christian, Winchester; Gustave Clifford, Round Top; H. E. Falmert, High Hill; J. K. Gault, Lagrange; R. A. McKinney, Lagrange; R. W. Miller, Lagrange; G. W. McDade, Lagrange; T. W. Moore, Fayette county; T. E. Brien, Fayette county; J. C. B. Renfro, Lagrange; J. W. Smith, Warrenton; R. Wilkinson, Rutersville.

Drs. J. W. Fennell and John M. McKnight, representing the Guadalupe Medical Society.

Drs. W. H. Park and E. R. W. McCreary, representing the Smith County Medical Society.

The following Medical Associations having submitted their constitutions and by-laws, conforming to the standard of this Association, upon recommendation of the Board of Censors, were received:

The Western Texas Medical Association, represented by Drs. Ferdinand Herff and George Cupples.

The Southwestern Texas Medical Association, represented by Drs. T. Somerville Burke and T. H. Nott.

Galveston County Medical Society, represented by Drs. C. W. Trueheart and E. Randall.

Dallas County Medical Society, represented by Dr. F. E. Hughes.

Hays County Medical Association, represented by Drs. A. N. Denton and Thomas M. Blakemore.

Motion to adjourn until 9 o'clock, A.M., to-morrow. Carried.

SECOND DAY—MORNING SESSION.

WEDNESDAY, April 4, 9 o'clock.

The President called the Convention to order.

Prayer by the Rev. Dr. Howard.

Roll call by the Secretary.

Minutes of yesterday read and adopted.

The President called upon standing committees for reports omitted yesterday.

Board of Censors asked for further time, final action not being taken on applications and credentials laid before them since yesterday.

Dr. Wooten, from the Committee on Legislation, appointed at last session, submitted a lengthy report, reviewing the causes which actuated the Legislature in the enactment of a law regulating the practice of medicine, and reciting the work performed by the committee in securing legislative recognition. Report received and referred to Publishing Committee.

The President stated that a resolution, handed in yesterday, endorsing and approving the action of the Travis County Medical Society in refusing to treat with irregular practitioners, could be read:

Resolved, That the State Medical Association approve of the action of the Travis County Medical Society, in refusing to co operate, in any professional manner whatever, with irregular practitioners in establishing a mixed Board of Medical Examiners to regulate the practice of medicine and surgery in the State.

Dr. J. B. Robertson addressed the Convention on the resolution. He had hoped that the members of the Convention would have given the subject serious study before taking final action upon it. That the adoption of the resolution would array the State Medical Association against the constitution and laws of the State. That to pass the resolution would be to warn the district judges that they must either obey the laws they had sworn to enforce, or, ignoring them, fall back upon the Medical Society of the State for instruction and guidance in the discharge of their duties. That whenever and wherever attempts were made to suppress irregulars, they had been strengthened in their claims for support.

Dr. Wooten said he was surprised at the position taken by Dr. Robertson. His convictions and understanding of the issue raised induced him to believe that all the district judges, except one or two, were in sympathy with the stand taken by the Travis County Medical Society. His argument in vindication and support of the course taken by the society, of which he was a member, was read. He said he had been an active participant in the matter under discussion from its beginning, and, in doing so, was prompted by no other motive than that having for its object the elevation of legitimate medicine.

Dr. Sears, of Waco, said he had hoped the resolution would pass without trouble, and thereby maintain the honor of the pro-

fession, and advance its cause. He regarded the organization as being based upon the high desire to elevate, rather than degrade, the standard of the profession. Thought it was beneath the dignity of the profession to treat with an error of any kind, and particularly an error that aimed its consequences against the safety and well being of the human race—that a defeat of the resolution would result in the disintegration of the Medical Association. Hoped the resolution would pass—its defeat would invite popular disgust rather than excite popular confidence in the dignity and honor of the profession.

Dr. Pope said that Crockett's motto, "Be sure you're right, then go ahead," should rule in coursing the acts of the Convention in this important matter. He gave a review of the efforts made to secure legislation regulating the practice of medicine. The present law was drawn by members of the Travis County Medical Society. It was the very best that could be obtained in the face of the State Constitution forbidding any discrimination between the schools of medicine. This law had just been unanimously endorsed by this Association, and the regular practitioners were bound by its provisions. It placed the appointing power in district judges. He read extracts from the argument of the committee of this Association before the legislature, wherein it was denied that physicians should have any right to the appointing power. Thought it inconsistent to now attempt to dictate who should or should not be appointed. He thought the law a good one; cited instances under his observation where it had worked well, debarring medical tramps from the franchises of the profession. Thought the profession should sustain the law, if its provisions could be carried out consistently. Did not believe it a violation of the code of ethics to accept places on the same board with irregulars. The law expressly avoided all points about which the schools differed. He believed the regulars

could, without violation of the code, consult with irregulars on any subject wherein there was no difference of opinion; but could not consult on the merits of a humbug, as was the case where the ten-thousandth part of a grain of anything was prescribed to be given for anything. If we acknowledged the code was violated by sitting on boards with the irregulars, we must also acknowledge violation of it when we issue them certificates, enabling them to practice medicine under the auspices of a board composed entirely of members of this Association. Said it was not denied we must do this, if the applicant passed the examination, be he homœopath or what not. Thought if we wanted the law we should carry it out consistently; if we were determined to be very scrupulous and jealous of our ethics, we could not even endorse the law that did not discriminate between the schools. He hoped the members would consider well before voting imprudently on a resolution that might lay them open to the charge of inconsistency.

Dr. Holland said he had no wish to take part in the discussion, but desired to suppress it. That if our Association was auxiliary to the American Medical Association, we were bound by the rules of that body. That a similar question had been decided by the American Medical Association which went to it from Michigan. Read the decree referred to and called for the question.

Dr. Dowell read a resolution passed at the Philadelphia convention touching the question under discussion.

Dr. Ross desired to make a personal explanation. He was a member of the Examining Board of the Travis County District, and accepted the position, not to aid in degrading the profession, but to protect it against the attacks of ignorant men. Alluded to the contempt that had been hurled at him by the Travis County Medical Society. Said he was simply discharging his

duty as an officer—that he was acting as an officer of the law, and not as a physician. He held no medical consultation with homœopathists, and never would recognize them. Said, by prudence, in six months time the issue would die out of its own folly.

Dr. Cupples said the question was one of vast importance to the profession, and commended the sentiment that would defer it to a future time for adjudication. He complimented Dr. Ross for the manly stand he had taken; believed that he had acted conscientiously in all he had done. Would vote for the resolution. Said the light of truth and irresistible principles, that govern the regular practice, could never be eclipsed by the energies and efforts of all its enemies combined. Could see no excuse now for the Convention, in the shape the question had taken, to evade its adjudication, and concluded by saying that if the relationship with the American Medical Association was to be kept up, the Convention was bound to sustain the resolution.

Dr. Park said Dr. Cupples had made his speech exactly.

Dr. Burroughs said he hoped the question would not be hurried. Did not view the resolution as other gentlemen, and did not think Dr. Ross was co-operating with irregular practitioners. That the wording of the resolution did not criminate Dr. Ross, and he was not on trial; that the Travis County Society had refused to affiliate with irregular practitioners, and all that was asked at the hands of the Convention was to say that the Travis County Society had done that which was right and proper. He thought that every doctor who consented to serve on an examining board should protest against irregular men being admitted. This was all that could be done under the existing law.

Dr. Swearingen said that Dr. Pope's distinctions were too fine for his comprehension, but that Dr. Robertson's position was easily understood. The General was afraid that the Convention would precipitate a revolution upon the State. He had passed through one revolution and came out of it badly, and evidently dreaded a repetition of his past experience. That Dr. Ross, in his explanation of his position, had shown the patriot. He loved a patriot, but he regretted that Dr. Ross had forgotten that he was a physician when he assumed that character in the Travis county affair. He knew Dr. Ross well, and deep down in his heart he knew that none but the keenest instincts of gentlemanly feeling had a place. Had none but feelings of regret when he saw Dr. Ross on the examining board. He could not rejoice when such men as Dr. Ross, upon whose head the wings of time had already began to scatter its silver dust, and around whose brow honor had entwined its wreaths, went into the midst of the enemies of truth and aided them in carrying on a warfare with virtue.

Dr. Dowell said, in voting for the resolution, the Convention, opposes, not the law, but the unjust judge who had improperly executed it.

Dr. Ashbel Smith asked for the resolution. Said he was reluctant to enter the discussion, but friends had urged him to do so. That Dr. Robertson's position could not be assailed. Opposition to the law would invite heavy misfortunes upon the best interests of the profession. Supposing that Dr. Ross and other competent men had refused to sit upon the board, it would have resulted in arming the charlatans with all the advantages the law sought to confide in the keeping of the regular practitioners. The exercise of the right of suffrage brought all classes together in a common interest, but because

he voted with a negro it was not the result of his own will, or the work of his hand, but he voted, notwithstanding. It was the fault of the law and not the profession, and he trusted that the doctors of Texas would not permit a little, insignificant judge at Austin to drive them away from the benefits of a law that sought to protect them. He would have the gentlemen of the Convention to imitate Governor Hampton. If they cannot get all they are entitled to, take what they can get, and get it in installments. Said there was no professional ethics involved in the question before the Convention. The duties of the board were simply ministerial. Liberty had been defined by old Prof. Gregory to be the right to go to hell in any way the traveler in that direction might elect, and so the people of Texas, in the exercise of their sovereign rights, might patronize, and would patronize, medicine or homœopathy, just as they might choose to select, and this Convention was powerless to remedy the evil. Thought we should hold fast to what we had, and not give up the laws and their benefits because a few homœopathic advocates had demanded them for their own uses.

Dr. Swearingen said he took issue with Dr. Smith. His and Dr. Robertson's position could be assailed. He would *not* make war upon the gentlemen for backsliding; for their awful dereliction of duty to themselves and the honor of the profession, but would beseech them in the name of every thing good to sin no more. The tap root of quackery has sent itself deep into the very bowels of the profession of medicine, and is sustained by its life blood. We regret to hear gentlemen experienced in the profession use such arguments. Our great State has medical talent of the first order, who are endeavoring to aid the great work of medical progress. Our State organization is the exponent of the views and sentiments of the pro-

fession of the whole State, and we are called upon to settle the question now before the Convention.

Dr. Smith moved that the resolution be postponed for six months.

Vote on the resolution called for.

During the discussion as to the manner in which the vote should be taken, a motion to adjourn was made.

Ruled by the President as out of order.

The vote was ordered to be taken upon a call of the members.

Dr. Smith's motion sustained by a vote of 39 yeas, to 35 nays.

Motion to adjourn. Carried.

Adjourned until 2:30 o'clock, P. M.

AFTERNOON SESSION.

Convention met according to adjournment.

Roll called.

Reading of minutes of morning session dispensed with.

Dr. Burroughs, from the Board of Censors, reported that the credentials of the delegates from the following societies had been examined and found regular:

Waco Medical Association, represented by Drs. J H. Sears and J. S. Willis.

Harrison County Medical Association, represented by Dr. John H. Pope.

Bell County Medical Society, represented by Dr. L. J. Russell.

Robertson County Medical Society, represented by Dr. R. B. Fancher.

Also the following gentlemen for permanent membership: Drs. T. Somerville Burke, Corpus Christi; F. E. Hughes, Dallas; T. H. Nott, Rockport; F. O. Norris, Eagle Lake; W. H. Holt, Velasco; A. C. Walker, Rockdale; T. C. Thompson and McKenzie Johnson, Galveston; R. W. McCutchen, Gladewater; R. B. Thomas, Flatonia; Y. D. Harrington, New Salem; Robert Reeves; Alexander W. Acheson, Denison; M. R. Brown and C. W. Truehart, Galveston; E. L. Thompson, Chappell Hill; S. Bowers; S. Eagon, Sherman; Joseph Cowling, Houston; L. M. Bruce, Masterville; R. M. Rutherford, Houston; E. Randall, Galveston; Jack Phillips, Wharton; Charles Ganahl, Galveston; A. L. Patten, Quitman; R. R. Porter.

On motion the Association adjourned to attend St. Patrick's Bazaar, on invitation from James Hickey, Secretary of central committee, and to visit St. Mary's Hospital, on invitation from C. H. Wilkinson, M. D., physician in charge, and from Hy. Smith, M. D., surgeon in charge United States Marine Hospital Service.

NIGHT SESSION.

The Convention met at 8 o'clock, P. M.

Dr. Towsey, from the Committee on Arrangements, introduced the President, Dr. R. H. Harrison, who then delivered his annual address.

Dr. Palmer followed in a lecture upon vegetable vitality.

Adjourned to meet at 9:30 o'clock, A. M., to-morrow.

THIRD DAY—MORNING SESSION.

THURSDAY, April 5, 9:30 o'clock.

The Association met and was called to order by the President.

Prayer by Dr. J. C. B. Renfro.

Roll called, and a quorum being present, the President announced that he was ready to proceed with business.

Minutes of second day read, and, on motion, were adopted.

Dr. Denton arose to call the attention of the chair to the fact that additional action had been agreed to be taken upon the difficulty that came up from Travis county.

Motion made to reconsider the vote taken on Dr. Smith's motion, carried yesterday, postponing action on a resolution endorsing the action of the Travis County Society in refusing to co-operate with irregulars.

Dr. Burt said that the regular order of business should be observed.

Dr. Smith asked that the minutes be read. Denied.

Dr. Denton insisted that the Convention was not in order, and urged that it go at once into the matter of reconsideration, which had been agreed to.

The Chair ruled that the reconsideration of the vote was in order.

Dr. Denton said the vote, yesterday, postponing, for six months, the consideration of the resolution endorsing the action of the Travis County Society was simply to set the time of its hearing at a period when there would be no one to hear it. He favored action that would do justice to that society, which simply asked to have the ethics of the profession sustained and vindicated. That what these gentlemen had done

was in strict conformity with the rulings of the highest medical authority in the land. The talk of flying in the face of judicial power and raising a revolution was devoid of argument. There were but two judges of the twenty-seven in the State who had overridden the wants of the people, and placed irregulars on the examining boards; and said, to postpone action for six months would do the State Association more harm than to act on it promptly and at once.

Dr. Ross said he hoped the question would not be again raised. Several gentlemen had left the Convention, and he thought it unjust to them to take snap judgment on them after they had left, thinking the matter settled. He could see no good that could result from a further discussion of the subject. He had offered to compromise the issue raised, and was still willing to do so. The Convention had delayed important business in order to gratify the overweening desire of gentlemen to defend the dignity of the profession before it was even assailed.

Dr. Wooten said it was not the Travis County Society who were moving for a reconsideration of the vote. They had come before the Convention conscious of the rectitude of their cause, and had simply asked to be vindicated or condemned in what they had done, to resist all infractions of the rules of the profession.

Dr. Trueheart said he was one of the affirmative voters of yesterday. He did not believe the present occasion should be permitted to pass into the interest of a heated and excited discussion. He favored a compromise, and held in his hand a resolution which he thought would satisfactorily adjust the difference that had occasioned so much uneasiness in our ranks.

Vote taken on reconsideration and carried.

Dr. Dale said he thought it was now in order to proceed at once to pass the original resolution.

Dr. Smith—The reconsideration of the vote of yesterday does not hasten the deliberations of the Association. He asked permission to withdraw his motion of postponement.

On motion, granted.

There was a call for the reading of the original resolution, and the Secretary read it.

Dr. Robertson said he did not fully endorse Dr. Smith's motion of yesterday. He did not believe the ethics of the American Medical Association had anything to do with the laws of Texas. If the resolution were adopted, a stigma would be placed upon a worthy member of the State Society. He offered a substitute he had prepared yesterday, and only withheld because he hoped that the discussion would be determined by the vote taken. He wished the adoption of a resolution throwing the weight of our objections against the judge who made the appointment, and not against Dr. Ross, the worthy gentleman whom he appointed. He had practiced medicine in Texas for thirty-five years; obtained his diploma from the first examining board convened under the Republic. Had watched the progress of the profession through all these years, and rejoiced to see that it now filled that high place that commanded the respect and enjoyed the confidence of all the people of the State. He moved the following substitute to the original resolution:

WHEREAS, It is the duty of the State Medical Association to protect the health of the people by using all the means in its power; and

WHEREAS, The appointment of irregular practitioners and incompetent persons to places on medical boards, by the officers having the appointing power, is detrimental to the interests of the people; therefore be it

Resolved, That, in the opinion of the Texas State Medical Association, the appointment of such persons to act on such medical boards, is an im-

pediment to the true advancement of the science of medicine in this State, upon which the welfare of the people depends, and that the Association enters its solemn protest against such construction of the law.

Dr. Trueheart said he was not a speaker, but he had an amendment to offer to Dr. Robertson's substitute; which, he said, endorsed the action of the Travis County Society, and exonerated Dr. Ross from all censure for what he had done, and concluded by authorizing the framing of a law (giving the appointing power to the supreme judges) which the legislature would be asked to enact.

Dr. Dowell said if the Convention endorsed Dr. Ross it could secure no recognition by the American Medical Association; and, further, if the resolution did not pass, there would be a new State organization formed which would pass it. Asked the Convention for God's sake to pass the resolution.

Dr. Denton moved that the substitute of Dr. Robertson, and the amendment by Dr. Trueheart, be laid on the table.

Dr. Robertson called for the yeas and nays.

Dr. Smith said a straight vote would speedily reach the sense of the Convention.

Dr. Robertson withdrew his call.

Vote taken, and motion to table carried.

Dr. Trueheart called for a division.

Motion again carried, on division.

Dr. Dowell moved that the original resolution (endorsing Travis County Society) be passed.

Carried amid applause.

Dr. Ross rose to a personal explanation, and asked the indulgence of the Convention. Said it was with extreme regret he had witnessed the proceedings of the last few minutes.

Dr. Cupples asked Dr. Ross to yield the floor for him to introduce a resolution, which was granted, but was overruled by the Chair.

On motion, the rules were suspended and permission granted Dr. Cupples to offer his resolution.

Dr. Cupples said, as one who voted sustaining the Travis County Society, he came to the front to prevent the impression that any cloud of blame rested upon one of the oldest and most honorable members of the State organization; and, to that end, he moved the adoption of the resolution exonerating Dr. Ross from blame, and declaring that the resolution just passed take its effect for the future.

Vote taken, by rising, and carried unanimously.

The President announced the Committee on Nomination of Officers for the ensuing year, as follows: Drs. Campbell, Blakemore, Starley, Cupples, Walker, Nott, Burke, Christian, Manning, Kilpatrick, Holland, Pope, Fennell, Renfro, Rutherford, Willis, Nettles, Dale, Acheson, Hughes, Bowers, Morris, Seeds, Fancher, Russell, DeLoach and Colley.

The Board of Censors recommended Dr. R. R. Garter for membership.

Also the Societies of Bell and Dallas counties were recommended for representation, and Drs. Russell and Hughes respectively authorized to represent them. Report received and adopted.

Dr. Robertson, of the Committee on Climatology and Epidemics, read a paper on the admirable adaptability of the climate of South-west Texas to diseases of the respiratory organs. Received and referred to Publishing Committee.

Dr. Carothers read his contribution on surgery.

Dr. Trueheart offered a memorial eulogy on Dr. Peete, prepared by Dr. Pinckney, of the United States Navy, which was received and referred to Publishing Committee.

Dr. S. R. Burroughs read his report on Indigenous Medical

Resources of the State. Received and referred to Publishing Committee.

Nominating Committee announced ready to report.

On motion, Association adjourned until 2:30 P.M.

AFTERNOON SESSION.

Association called to order by the President.

The Committee on Nominations reported as follows:

For President, W. D. Kelly, M. D., Galveston; for First Vice-President, Geo. Cupples, M. D., San Antonio; Second Vice-President, R. M. Swearingen, M. D., Austin; Third Vice-President, J. H. Sears, M. D., Waco.

On motion, they were elected unanimously.

Dr. Stuart moved the appointment of a committee of three to escort the new President to the chair. Carried.

The President appointed Drs. Stuart, Burt and Trueheart, said committee.

Dr. Kelly was introduced by the retiring President, who said he was pleased to know that, in resigning his office, its duties would devolve upon an able and efficient gentleman.

Dr. Kelly responded in appropriate terms, returning thanks for the honor conferred.

Drs. Cupples, Swearingen and Sears each gracefully thanked the Association for the confidence reposed in them.

On motion of Dr. Bowers, a vote of thanks was tendered Dr. Harrison, the retiring President, and the Secretary instructed to give him formal notice of this fact.

Dr. Harrison replied in a feeling address.

Dr. Sears, from Committee on Organization, reported, recommending the adoption of the plan of organization that had been submitted to the committee at last session.

Dr. Bowers objected to the plan recommended for electing officers. (By a nominating committee.)

Dr. Sears explained that the provision was misunderstood. The Nominating Committee only reported, recommending certain parties to be elected to certain offices. The report could be adopted or rejected by the Association.

Dr. Harrison thought the plan, as a whole, hardly met the wants of the Association.

Dr. Heard, who originally proposed the plan, was requested to explain the portion relating to a Judicial Council, and did so, expressing the belief that it would successfully meet all the exigencies that might arise.

Dr. Sears moved to refer the matter to a special committee of five, with instructions to report to-morrow morning. Carried.

Committee—Drs. Heard, Herff, McLaughlin, Pope and Park

The Committee on Publishing, Finance and Claims was called on for report. Answered by the Chairman, Dr. Pope. Report received and adopted.

Dr. Manning read his report on Ophthalmology and Otology. Received and referred to Publishing Committee.

Dr. Pope moved that the reading of the essays be made a special order for to-morrow at 9 A.M. Carried.

Dr. Larendon made his report as Treasurer. Received and adopted.

Dr. East made his annual report as Secretary. Received and adopted.

Dr. Swearingen said that Dr. Rayfield had prepared his report as Chairman of Committee on Diseases of Women, which he moved be received by caption and referred to Publishing Committee. Carried.

On motion, Association adjourned until 9 A.M. to-morrow.

FOURTH DAY—MORNING SESSION.

FRIDAY, April 6, 9 o'clock.

The President called the Association to order.

Roll Called.

On motion, reading of the minutes of morning session was dispensed with.

Complaint was made by some of the delegates that they had been unable to obtain the excursion rates, as had been agreed upon between the Committee of Arrangements and some of the railroad companies.

After a brief, irregular discussion of the question, Dr. Welch stated that Dr. Harrison had the letters from the railroad officials, and would go, at once, in person, and remedy the wrongs complained of.

Dr. J. J. Burroughs asked that the Board of Censors be granted further time in passing upon the application of the Medical Society of Colorado county.

Dr. Christian asked if the matter was debatable.

Decided not debatable. Time granted.

The President announced that the reading of essays was a special order for this hour.

Dr. Bibb submitted an essay, which was received and referred to Publishing Committee.

Dr. Rutherford submitted an essay. Received and referred to Publishing Committee.

Dr. Goldmann read a paper on diseases of the heart, which was received and referred to Publishing Committee.

Dr. J. J. Burroughs submitted a paper (which was read) on stone in the bladder, written by Col. Work, and descriptive of his sufferings from the disease. Dr. B. also exhibited several

specimens of calculi, and a curiosity in the shape of a "veritable mad-stone."

Dr. Kilpatrick referred to the resin weed, spoken of by Dr. Burroughs' patient, adding the testimony of his experience in behalf of its virtues, and also mentioning that he had called attention to this plant in an article submitted at a former meeting of this Association.

Dr. Powell made some remarks on the treatment of stone, and gave a graphic account of an operation he had performed.

Dr. Pope reported for the special Committee on Organization, suggesting some minor changes in the plan heretofore reported.

Dr. Heard made an elaborate report of the operation of the plan suggested.

On motion of Dr. Renfro, the report was received and adopted.

On motion of Dr. Heard, the Nominating Committee was called, and instructed to proceed at once to discharge the duties that, under the present plan of organization, devolve upon it.

Dr. Park exhibited, and explained the advantages of, a strabismus hook and knife combined, the invention of Dr. T. D. Manning.

Dr. Sears moved that the address of the President, and the lecture of Dr. Palmer, be referred to Publishing Committee. Carried.

Dr. Palmer offered the following:

WHEREAS, The members of our profession are subject to be called on, sometimes in obedience to subpœna, summons, or by city councils, to perform duties as experts, and whereas courts of justice have paid for such services in witness fees of $2 50, and city councils have refused to pay for such services; therefore, be it

Resolved, That this Association sustain any of its members in demanding a just and liberal fee for such services.

Held for action under the rules.

Dr. Wise read a paper advocating the claims of the Texas Medical College and Hospital.

Dr. Dowell introduced a little boy suffering with cancer; exhibited the case to the Association, and explained at length the treatment he had resorted to.

Dr. Herff was called upon, and spoke briefly on the character and treatment of cancer.

Dr. Wooten, by request, related his experience in the treatment of cancer.

Dr. Carothers made some remarks on the same subject.

The Committee on Nominations, through their Chairman, Dr. Campbell, reported the following Chairmen and Secretaries of Sections:

1. PRACTICAL MEDICINE, MATERIA MEDICA AND PHYSIOLOGY.—Dr. T. J. Heard, Chairman, Galveston; Dr. C. H. Wilkinson, Secretary, Galveston.

2. OBSTETRICS AND DISEASES OF WOMEN AND CHILDREN. Dr. Ferdinand Herff, Chairman, San Antonio; Dr. A. N. Denton, Secretary, San Marcos.

3. SURGERY AND ANATOMY.—Dr. T. D. Wooten, Chairman, Austin; Dr. T. D. Manning, Secretary, Austin.

4. MEDICAL JURISPRUDENCE, CHEMISTRY AND PSYCHOLOGY.—Dr. Charles Ganahl, Chairman, Galveston; Dr. S. R. Burroughs, Secretary, Houston.

5. STATE MEDICINE AND PUBLIC HYGIENE.—Dr. A. R. Kilpatrick, Chairman, Navasota; Dr. J. S. Willis, Secretary, Waco.

Also the following committees:

COMMITTEE ON PUBLICATION.—Dr. Jno. H. Pope, Chairman, Marshall; Drs. E. P. M. Johnson and E. B. Blocker, Marshall; S. F. Vaughan, Jonesville, and A. B. DeLoach, Longview.

COMMITTEE OF ARRANGEMENTS.—Dr. F. Herff, Chairman, San Antonio; Drs. T. M. Blakemore and A. N. Denton, San Marcos.

COMMITTEE ON PRIZE ESSAYS.—Dr. S. Eagon, Chairman, Sherman; Drs. S. D. Thruston and —— Walton, Dallas; Dr. J. H. Pope, Marshall.

JUDICIAL COUNCIL.—Dr. J. B. Robertson, Chairman, Washington county. Members—Drs. Ashbel Smith, C. Campbell, George Cupples, S. M. Welch, B. F. Eads, H. W. Brown, L. E. Locke, R. H. Harrison, F. W. Holland, T. M. Marks, J. W. Fennell, A. E. Carothers, A. C. Walker, D. F. Stuart, F. E. Hughes, J. M. Ross, T. S. Burke, A. B. DeLoach and J. C. B. Renfro.

The committee adopted the following:

Resolved, That Dr. East, the Secretary, be authorized to appoint the Committee on Necrology.

In pursuance of which resolution, the Secretary appointed the following as said committee:

Dr. T. J. Heard, Chairman, Galveston; Drs. J. B. Robertson, Washington county; D. R. Wallace, Austin; R. T. Flewellyn, Houston; J. H. Sears, Waco; R. H. Jones, Dallas; J. H. Webb, Bryan; W. C. McGown, Austin; Ashbel Smith, Harris county; J. N. Baylor, Navasota; W. C. Blanchette, Round Top; J. S. Cunningham, Hempstead; O. H. Seeds, Columbia; J. L. Irion, Montgomery; J. D. Rankin, Calvert; J. M. Morrison, Hearne; Thos. W. Wiley, Dallas; Jno. H. Pope, Marshall; Hillary Ryan, Caldwell; D. A. Shuford, Tyler, and Geo. Cupples, San Antonio.

The Board of Censors reported on the case of Dr. Dial, referring the matter to the Association for final disposal.

Dr. Renfro moved that the papers bearing on the case be referred to the Judicial Council, with instructions to report at the next session.

Dr. Heard spoke briefly in support of the motion.

Motion put and carried.

Dr. Denton moved the reference of the address of Dr. Wise, and all other papers on the Secretary's table, to the Committee on Publication. Carried.

Dr. Larendon moved a vote of thanks to the *Galveston News* for its faithful report of the proceedings of the Association. Carried.

On motion of Dr. Renfro, a vote of thanks was extended to the citizens of Galveston, generally, for the hospitalities enjoyed by the Association.

Dr. Palmer re-read his resolution, which had been held under the rules; and, on motion, it was adopted.

Dr. Kilpatrick submitted a report of the rainfall in Wallace Prairie, Grimes county, for the past year. On motion, referred to Publishing Committee.

Dr. Kilpatrick read report of a case in practice which was referred to Publishing Committee.

Dr. Burroughs moved a vote of thanks to St. Mary's Hospital for the entertainment provided for the Association. Carried.

On motion of Dr. Kilpatrick, the thanks of the Association were voted the Secretary and Treasurer.

Dr. Carothers moved a vote of thanks to the railroad companies that had extended courtesies. Carried.

Dr. Denton moved that a committee of three be appointed to draft rules for the government of the next session. Carried.

The President appointed Drs. Denton, Dowell and Carothers as said committee.

The President appointed the following delegates and alternates to the American Medical Association:

DELEGATES.—Drs. E. B. Blocker, A. E. Carothers, S. M. Welch, J. J. Burroughs, H. K. Leake, J. Larendon, J. H.

Sears, W. A. East, E. J. Beall, A. N. Denton, T. S. Burke, A. G. Clopton, S. Eagon, M. A. Taylor, O. H. Seeds, R. W. McCutchen and J. F. Hooks.

ALTERNATES.—Drs. F. H. Johnson, E. T. Dale, Thos. Colley, J. C. B. Renfro, McKenzie Johnson, F. M. Hall and T. W. Wiley.

The President appointed Dr. T. D. Manning, of Austin, Essayist, and Dr. J. F. Y. Paine, of Galveston, Alternate.

Dr. Dowell moved that the names of members who have died, and of those who have withdrawn from the Association, be dropped from the roll. Carried.

The Secretary read the following telegram:

LOUISVILLE, KY., April 3, 1877.

Secretary Texas State Medical Association:

I expressed a box to you, containing some models and patterns of the plaster pocket, which please offer to the Society, with my kindest regards and most cordial remembrances to every member.

D. W. YANDELL.

On motion, a vote of thanks was extended to Dr. Yandell. Pending a short recess, the members of the Association examined the models and patterns.

A paper by Dr. S. F. Starley was read by the Secretary, and, on motion, referred to Publishing Committee.

The President appointed, as Committee on Legislation, Drs. Wooten, Taylor and Carothers, of Austin.

Also the following Committee on Climatology and Epidemics: Dr. J. H. Sears, Waco, Chairman; Drs. D. R. Wallace, Austin; C. H. Wilkinson, Galveston; T. M. Marks, Marshall, and Ferdinand Herff, San Antonio.

There being no other business before the Association, the President announced that a motion to adjourn would be in order.

On motion, adjourned to meet in the city of San Antonio, the first Tuesday in April, 1878.

W. D. KELLY, M. D.,
Pres't T. S. M. A.

W. A. EAST, M. D.,
Sec'y T. S. M. A.

NOTE BY THE SECRETARY.—Owing to the continued confusion, consequent upon a point of ethics which absorbed the attention of every member until the last day of the session, some omissions may have crept into the proceedings which may slightly disturb the harmony of the work—like the accidental omission of a syllable in an otherwise complete hexameter. Be this as it may, we ask most politely of each member one favor—and this upon the "good turn" principle—to do for us what nobody else can: excuse as far as possible any defect. W. A. E.

SECRETARY'S REPORT.

To the President and Members of the Texas State Medical Association:

Your Secretary, during the past year, has performed the duty assigned him as promptly as it could have been done under the difficulties surrounding him. He has received and answered ninety-two letters and written forty-one additional on business of the Association.

The following transactions from other Medical Societies have been received:

Transactions of the State Medical Society of Arkansas, 1875-6; Transactions of the Medical Society of Virginia, in *Virginia Medical Monthly*, 1876; Transactions of the Colorado Medical Society, Denver, 1876; Transactions of the Connecticut Medical Society, New Haven, 1876; Proceedings of the Medical Society of the County of Kings, Brooklyn, New York, 1877; Transactions of the State Medical Society of Wisconsin, Milwaukee, 1876; Transactions of the Medical and Chirurgical Faculty of Maryland, Baltimore, 1876; The Sanatarian and Organ of the Medico-Legal Society of New York, 1876; Transactions of the South Carolina Medical Association, 1876; Transactions of the Medical Association of the State of Arkansas, 1875; Constitution and By-Laws of the Western Texas Medical Association, and the Constitution and By-Laws of the South-Western Texas Medical Association. All of the above ask "please exchange," and your Secretary invariably referred them to our Publishing Committee, not a single copy of our Transactions having come into my possession until the first week in March. 1877, when two copies, addressed to the Medical Society of Lavacca county, were handed me by the post-master.

I desire to call your attention to article 5, section 4, of our constitution, which deserves special consideration during this session.

A faithful record of the proceedings, all books, papers and things, and a register of the members, dates of their admission, and place of residence. have been kept.

Have had no chance to keep accounts with members, this task being in the hands of our worthy Treasurer. No orders have been attested, because none have been presented. Except in the instances referred to in your Secretary's first and second reports, and one in this, no money has been collected. The one in this is the amount received from Dr. Ferdinand Herff, of San Antonio, seven dollars and fifty cents, his admission fee and dues, which was promptly paid to your Treasurer, who receipted for the same. Nor has your Secretary been able to respond to applications for copies of our Transactions.

I am sorry to have to say that some trouble arose in relation to our delegates to the International Medical Congress, which it was impossible to remedy for want of time, and what seemed to be a general misunderstanding.

A question arose last summer, during our recess, as to the membership of many who, at the organization of the Association, were appointed on committees, and who were absent at such organization. Others have never attended, paid no dues, or interested themselves in any way in promoting the interests of the Association. Your Secretary would suggest that this question be acted upon at this term. If decided that such are members, they should be asked to share their portion of the responsibility of the Association by a regular attendance at the annual meetings, and a prompt payment of dues from the organization of the Association to the present time.

Fayette County Medical Society complains that the society, and its delegate, were omitted in the published transactions of 1876. By reference to Secretary's book, page 193. Fayette County Medical Society is properly recorded. The delegate, Dr. J. W. Smith, is also duly entered.

I desire, also, to call your attention to account between your Secretary and the Association, and ask that some steps be taken to adjust the same.

Voluntarily your Secretary has addressed county Medical Societies, requesting them to transmit to this Association, at its annual meeting, an account of their several proceedings, with their views of the means best adapted to improve our standing, and to diffuse useful knowledge among those who manage its labors. Since our meeting in 1876, societies have organized in the State, and your Secretary has communicated with them, but from many he has received no response in furtherance of the views of the societies, and he is yet very imperfectly informed as to the number of the county societies in the State, who are their officers, and whether they are auxiliary to the State Association. While it is to be regretted that this act of courtesy, on the part of the officers of county societies, has not been extended to the State Association, we are happy to acknowledge that from several societies which have organized in the State, we have had the pleasure to receive, from gentlemen connected with them, an account of such organization, and the names of those who have been chosen its officers. To such gentlemen, in behalf of the State Association, your Secretary returns thanks, and trusts that hereafter this act of courtesy will not be omitted by such other societies as may successively be formed in the State.

He has not heard a dissenting voice to the beneficial effects which have followed these first trials of professional improvement; on the contrary, as far as public opinion could be gathered from the papers which have announced these meetings, thay have spoken in warm commendation of the good effects which have already been experienced, and in anticipation that greater will follow. These associations will annually become more useful and interesting; new fields will be opened for investigation, and the old ones more thoroughly and satisfactorily explored. Business at our annual

meetings will be more systematically conducted, and everything connected with legitimate medicine assume a due course of improvement, so that we will command public approbation and make advocates of those who are now unbelievers or neutrals. Churchmen, yea even honorable senators and representatives, ask, what is the object of your medical organization? They seem never to have thought of the matter. Medical men are looked upon as rather below par. These things are mentioned, not for the purpose of whining over a grievance, but that we may point to the remedy for such a humiliating condition. We know that in service, value and the ever-pressing needs of humanity, we of the medical profession are as much a power in the State as the law and the church. We lack, however, all intercourse between the profession and the officials who successively administer the affairs of the country, and so long as this is the case, we shall be of low esteem in the public eye—of no esteem, in fact—further than as we are required to administer to the instant necessities of individuals.

W. A. East, M. D., Sec'y,

In Account With Texas State Medical Association.

		Dr.	
April 20. 1874.	To amount received from Dr. C. H. Wilkinson, Secretary Galveston Medical Society, for six years' dues to State Association	$22 50	
	To amount from same, annual dues T. J. Heard, M. D.	2 50	
	To amt. from R. H. Cole, M. D., annual dues	2 50	
	Total Amount	$27 50	
1874.			Cr.
Apr. 11 to Aug. 12	By amt. paid postage on letters		$2 50
Apr. 14 to Sept. 14	By amt. for paper and envelopes		2 00
Aug. 27.	By express on seal from Dallas		25
	By express on papers to Publishing Committee		25
Aug. 18, to Jan. 14 '75	By amt. paid for postal cards		1 25
April 24.	For printed certificates for delegates to American Medical Association		3 00
Apr. 13, to March 13.	By amt. for pens		50
June 10.	By amt. for ink		50
	By amt. paid Austin Statesman for publishing names of members of committees		2 00
Jan. 30, '75	By amt. paid postage on proceedings sent to physicians west of Brazos river		7 25
	By amt. paid express on 200 proceedings from Houston, sent by Dr. D. F. Stuart		1 75
April 6.	By amt. paid for ink and paper		1 25
	Framing picture, (Siamese twins)		3 50
	Total Amount		$26 25
Deduct debits, (amount received)		$27 50	
Leaving balance due Texas State Medical Association			$1 25

		Dr.	Cr.
1875			
	Balance due Association as above	$1 25	
	Amt. received from Dr. J. M. Litten, dues	2 50	
	" " " " W. A. Morris, "	2 50	
	" " " " J. W. McLaughlin "	2 50	
	" " " " R. M. Swearingen, "	2 50	
	" " " " J. G. Sinclair, dues	2 50	
	" " " " W. H. Tobin, dues	2 50	
	" " " " W. A. Dohme, dues	2 50	
	" " " " B. Hadra, dues	2 50	
	" " " " J. W. Stalnaker, dues	2 50	
	Total Debits	$23 75	
	By amt. paid at Austin for pens, paper and ink		$ 1 50
May.	By amt. paid for minutes, pens, ink and paper		2 00
June.	By express on papers from Austin to Columbus		50
	By letter paper, envelopes and stamps		2 50
	By postage on papers from Harwood to Columbus		25
October.	By postal cards for Association		1 50
	By repairs on seal		1 00
	By amt. paid S. Lee Kyle for printing		1 50
	By amt. paid for paper, pens and ink		2 50
November	By postal cards, paper, envelopes and stamps		2 50
1876.	By amt. paid S. Lee Kyle for certificates for delegates to International Medical Congress		6 00
	By amt. paid Wm. Sheely, post-master, for paper, stamps, envelopes and postal cards		16 50
	Total Credits		$38 25
	Deduct amount received (debits)		23 75
	Leaving balance due your Secretary		$14 50

Whole amount expended $64 50
" " received 50 00

$14 50

Respectfully submitted.

W. A. EAST,

Secretary T. S. M. A.

TREASURER'S REPORT.

To the President and Members of the Texas State Medical Association.

GENTLEMEN:—Your Treasurer reports the following receipts and disbursements of cash, during the year ending April 3, 1877:

April 3, 1876.	Balance as rendered per last report	$ 21 90
	Received from members and local Medical Societies, fees and annual dues	664 50
Mch. 31, 1877.	Received from John H. Pope, Chairman Publishing Committee	59 70
	Total on hand and collected	$746 10

DISBURSEMENTS.

April 6, 1876.	Expense account, to H. W. Brown, M. D.	$ 12 50	
April 3, "	Paid W. A. East, M. D., Sec'y's salary	200 00	
April 6, "	Expense account	17 50	
Oct. 7, "	Paid J. H. Pope, M. D., Chairman Publishing Committee, per order President,	153 00	
Nov. 10, 1876.	Paid J. H. Pope, M. D., Chairman Publishing Committee, per order President,	15 00	
April 6, 1876.	Paid R. H. Harrison, M. D., balance due on publication of Proceedings for 1875	257 07	
April 8, 1876.	Paid "Telegraph" reporter	10 00	
April 27, 1876	Paid fr't on box Transactions to Marshall	1 25	
	Postal cards and stamps during the year,	3 00	
	Total disbursements		$669 32

RECAPITULATION.

Total amount received	$746 10
" " paid out	669 32
Balance on hand	$ 76 78

Respectfully submitted.

J. LARENDON,

Treasurer T. S. M. A.

REPORT OF PUBLICATION, FINANCE AND CLAIMS COMMITTEE.

Mr. President and Gentlemen:

Your Committee on Publication, Finance and Claims begs leave to submit the following report:

We have had no printing done except the publication of the Transactions of the Eighth Annual Session.

The Secretary of the Association requested the committee to have printed blanks, to facilitate a uniform report from the various county societies. When the request was made, the finances were in an unsatisfactory condition, and hence the committee did not feel justified in incurring further expense until the Transactions were published and paid for. We will only remark that we approve of the Secretary's plan, whenever the financial condition of the Association shall justify it.

The appearance of the volume of Transactions would have been hastened by several weeks, but for causes which, we feel assured, can hereafter be avoided, and hence we mention the main difficulties, and ask permission to suggest what we believe to be a proper remedy. First, as to finances. The debt standing over from 1875 drew heavily on the treasury, and reduced the amount collected in 1876, dues, etc., by $134.57. There is *no* debt standing over this year—this source of depletion the treasury is rid of, and all the funds collected at this, the ninth annual session, will go to defray expenses of the current year (1877). Besides, we start the new year with a balance on hand of $76.78, as shown by statement of Treasurer; hence, we believe there will not be this cause of embarrassment, which, with your present committee, necessitated an extensive correspondence, soliciting advertisements, etc. We recommend that advertisements be excluded from the volume, so soon as the expense of publication can be borne without this source of revenue. In our opinion, advertisements mar the appearance of the book to a greater or less extent. The expense of publication was curtailed by reducing the number of copies published, from one thousand (as heretofore) to five hundred. This number has proven to be entirely sufficient, and we believe will be ample for each year, until our Association reaches a paid-up membership of at least three hundred. The second cause of delay, viz., waiting for manuscript, we are confident can be avoided. The Secretary had considerable difficulty in arranging his minutes, and putting them promptly in the hands of the Publishing Committee. Under the present plan of organization, we believe it next to impossible for one Secretary to keep accurate minutes [illegible] proceedings. And more especially unless every member [illegible] the Presi-

dent and transact the business with system. Each session is like organizing an entirely new body, and the members do not co-ordinate well in such a short session; the President is forced by circumstances to allow more or less latitude in the order of business, and the Secretary is the sufferer. Now, as a remedy for all this delay of minutes and contributions, we most earnestly recommend the adoption of the plan of organization proposed at the last meeting, and to be acted on at this, which is essentially the same as that of the American Medical Association. The labors of the session, will be, by this, divided among various sections, with certain duties, and a secretary to keep its minutes. The Secretary of the Association and all contributors are required to have manuscript in hands of the committee by the first of July, following the session. This being the condition of affairs, there will be no difficulty in placing the published transactions in the hands of members of the Association by the next October.

In awarding the printing contract, your committee, after carefully examining all the bids, gave the work to Messrs. Jennings Brothers, at Marshall, Texas, at one dollar and a half per page.

A copy of the Transactions has been sent to each medical journal known to the committee in the United States; to each State Medical Society whose address could be ascertained; to each officer and member of this Association, whose name was furnished by the Treasurer; to the various county and city Medical Societies shown by the minutes to have been represented at the eighth annual session; to a number of prominent physicians in various parts of the United States; to the medical departments of the army and navy, and Bureau of Education; to the librarian of the American Medical Association. Finally, many of the copies, left after above distribution, were sent to Medical Societies and physicians in the counties more immediately tributary to Galveston, in the southern portion of the State, and along the lines of railway. This was done with the hope of inducing a larger attendance at the ninth session of the Association. There were still remaining on hand ninety copies of our Transactions, of which twenty-five were turned over to the Treasurer, and sixty-five shipped to Galveston for distribution among members attending the present session.

The committee undertook the mailing of the Transactions directly to members and others, with the hope of saving eighteen or twenty dollars postage, under the law allowing "pound rates" of postage on periodical publications when mailed at the office of publication. The President and Secretary were requested to furnish addresses of parties in other states entitled to a copy of our Transactions. Through the kindness of several medical journals we were enabled to learn the addresses of many of the other State Societies. A copy of Transactions was mailed in exchange for those of each society whose address had been thus obtained. These exchanges were sent to Treasurer Larendon with the box of (1877) Transactions of this Association.

The following statement shows the receipts and expenditures under the [illegible]ittee:

RECEIPTS.

Amount Treasurer Larendon's draft	$153 00
" from Dr. R. H. Harrison, including $15 charged to committee by Treasurer, Nov. 10, 1876	115 00
" from advertisers	194 00
" " sale of copies of Transactions	2 00
Total from all sources	$464 00

EXPENDITURES.

Postage on correspondence of committee	$ 4 25
Telegram to Dr. Yandell about manuscript	1 20
Express charges on plates for Dr. Dowell's article	1 25
Commissions of Raguet & Fry for collecting Treasurer's draft	50
" " " A. M. Leslie & Co's d'ft	25
Stationery, 60 cts.; porterage in mailing Transactions, $1.00	1 60
Amount paid Jennings Bros. for publishing Transactions, printing slips, and for wrapping paper	355 00
Amount paid W. P. Gaines for collecting dues, per account of Austin advertisements	15 00
Postage on Transactions mailed	24 00
Porterage and drayage on Transactions shipped to Galveston and Houston	1 00
Exchange on draft, City Bank, Houston	25
	$404 30
Amount turned over to Treasurer Larendon	59 70
	$464 00

There is still due the Association an uncollected balance on advertisements amounting to $20.00. It is probable that most, if not all, of this will be collected during the coming year.

During the year 1875, some county societies, and many members of the Association, advanced sums of money to pay off the indebtedness of the Association, with the understanding that said amounts were to be refunded, either in cash or credits on annual dues. The aggregate still due on this account is $152.50. This, of course, is in the nature of a debt against the Association, and lessens, by that amount, the sum that will be paid into the treasury this year, and available for ordinary expenses.

All of which is respectfully submitted.

JNO. H. POPE,
Chm'n of Publishing Committee.

REPORT OF COMMITTEE ON LEGISLATION.

Mr. President and Gentlemen:

The Committee on Legislation, to whom were referred the outlines of several plans for modifying the law of the State regulating the practice of medicine, with instructions to frame and secure the passage of such an act as to them might seem proper and necessary, beg leave to submit the following report:

There were three separate plans submitted to the consideration of the committee, having general features in common, from which we were instructed and expected to digest a suitable bill. The necessity for legislation at this time arose from the provision, in the new State constitution (Art. XVI, sec. 31), which operated as an essential abrogation of the then existing law on the subject. The constitutional clause referred to, while it rendered necessary a new enactment to supply the place of the old law, contained a prohibition which acted as an insuperable obstacle to any satisfactory regulation in reference to practitioners of medicine. The language of the constitution is to the effect that the "Legislature may pass laws prescribing the qualifications of practitioners of medicine in this State, and to punish persons for malpractice, *but no preference shall ever be given by law to any schools of medicine.*" It thus became necessary to steer between this prohibitory provision, on the one hand, and the danger of too great laxity on the other. Added to this embarrassment was the difficulty, always imminent in dealing with assemblies of a non-professional character, of conciliating the whims and prejudices of the legislators themselves, in order to prevent factions

and unreasoning opposition. Thus trammelled and restricted, it was no easy matter to frame a law which should have a regard for these outside influences, and at the same time prove acceptable to the profession throughout the State. The committee, however, felt it to be their duty, under their instructions, to agree upon some plan of meeting these various exigencies. Taking the three proposed bills referred to us as the basis of operations, and after mature and careful deliberation, the law, as it now stands among the acts of the fifteenth legislature, was agreed upon and presented to that body. The prominent features of the statute are by this time familiar to the profession. The essential changes from the old law consist in the discarding of diplomas as criteria of professional qualifications; the substitution of district for county judges as the appointing power in constituting the examining boards, and the establishment of a uniform examination for all applicants for admission to practice medicine, upon certain branches of medical science named in the law. These changes were for the most part necessary in order to adapt the bill to the new constitution, and their wisdom will, we think, be apparent upon a slight consideration of the subject.

Foreseeing some opposition to the passage of the law, arising from want of appreciation of its design, and a mistaken idea of its provisions and intended operation, the committee prepared and submitted to the senate "Committee on State Affairs," to whom the bill had in due course been referred, an argument of some length explanatory of the various portions of the proposed act, and intended to demonstrate its wisdom and necessity as a whole. On recommendation of the senate committee, five hundred copies of the argument were ordered to be printed to accompany the bill. We herewith submit a copy of the argument, and ask that the same be incorporated as part of this report. Though written with special reference to the non-professional mind, it

contains a thorough discussion of the law in all its phases, and presents fully the various reasons which influenced and controlled the committee in the formation and advocacy of the bill.

In concluding this report, the committee desire to say that they framed and secured the passage of the existing law after the most careful consideration, and in obedience to the instructions of this Association and the heretofore expressed views of the profession generally. We could not help but feel that there was a growing sense of dissatisfaction with legislation in general in reference to this subject, and that there are strong grounds for believing that the tone and dignity of the medical profession itself are the most reliable and satisfactory guardians both of professional honor and the public welfare. At the same time we felt that our own private views should be subordinated to the will of the Association, and that legislation being the only recognized means of reaching the evils apprehended, it became our duty to make the best of the circumstances surrounding us. If the law has in some degree acted as an element of discord and demoralization among the physicians of the State, it is a result we deeply regret, and one that we feel constrained to remark is not a necessary concomitant of the law itself. The difficulty has, we believe, arisen from other influences. Without entering into a discussion of the merits of legislation as a means of regulating professional qualifications, we feel warranted in impressing upon this Association the fact that our own experience, and the experience of the profession at all times, and everywhere, have demonstrated the utter futility of attempting to enforce by law a rigid standard of merit and fitness without the unanimous and unbroken support of the physicians themselves. An unflinching championship of our established customs, and an unwavering obedience to our fixed principles of ethics, and our accepted standard of [illegible] tue are our only true safe-guards.

If, in addition to the opposition and unreasoning prejudices of the public, which are operating to nullify the law, the profession itself falls a victim to discord and perfidy, we are reduced to the last degree of humiliation and helplessness. The law in force is, we believe, as perfect and as stringent as can be framed under existing circumstances, and if construed and executed with a regard for its true aim and design, will operate for the public protection and safety. But now, as at all times in the professional history, the physicians themselves must look to themselves for the real efficacy of legislative enactments, both as regards society at large and especially as effecting their own dignity, integrity and purity.

Respectfully submitted.

THOS. D. WOOTEN,

Chm'n of Legislative Committee.

ARGUMENT DELIVERED BEFORE THE COMMITTEE ON STATE AFFAIRS (TEXAS STATE SENATE) BY A COMMITTEE OF THE TEXAS STATE MEDICAL ASSOCIATION, INTENDED TO DEMONSTRATE THE WISDOM OF "AN ACT TO REGULATE THE PRACTICE OF MEDICINE," AND MADE PART OF THE REPORT OF COMMITTEE ON LEGISLATION.

It will be seen that the points of material difference between the act now in force and the one by which it is proposed to supplant the same, are these: The proposed act, in the first place, discards one of the criteria of fitness to practice medicine in this State as enumerated in the old laws, viz.: a diploma from a medical college; and makes the sole criterion and the crucial test to consist in a satisfactory examination before an examining board appointed by the district judge in and for each judicial district. And herein arises another point of difference: the old law provides that the "board of medical examiners" shall be appointed by the county court in and for each county. The next of the proposed changes is the definite statement of the field which shall be embraced in the examinations for admission to practice medicine in any of its branches or departments in this State, the subjects being specifically named in the proposed bill. It will now be our endeavor to review, as briefly as possible, these points of material difference, omitting those of minor importance, and to adduce a few

reasons in the light of which we think the wisdom, the necessity and the satisfactory nature of the bill offered, cannot fail to be apparent to all candid minds.

And before entering upon a detailed discussion of the provisions of this bill, it may prove beneficial to consider the general grounds and intelligent reasons upon which all laws of this nature are enacted. Every act of *general* legislation is presumed to rest upon a certain general basis, some universal principle; and it is this applicability to the wants, necessities and interests of society at large, which constitutes the essential nature of a *law*. Otherwise the act is a mere exceptional exercise of legislative authority, and one which has very justly incurred the displeasure and aroused the opposition of those who have become persuaded of the evils of *special* and *class* legislation. It has been the misfortune of most of the attempts at legislative supervision in the direction contemplated by the bill now before us, to incur the stigma of special legislation, and under the depressing influence of so unfortunate a charge, it has been impossible to secure the passage of any law sufficiently stringent or satisfactorily explicit upon the subject of the practice of medicine. The physicians have been regarded as claiming the special protection of the law-making power, and their suggestions have been ignored and their wishes overlooked from the belief that they were actuated by feelings of narrow and exclusive discrimination. Why so erroneous an opinion should have gained credence or exerted an influence with those who have wielded the legislative power of the country, it is difficult to understand. Certainly no law can claim a more universal application, or a more intimate relation to the necessities of society, and there can surely be none that is more imperatively demanded by the public welfare than one intended to regulate the qualifications and fitness of a class of men who are invested with the guardianship of the lives and health of our citizens, and whose duty it often becomes to exercise a vital control over many of the most solemn and sacred interests of the domestic circle.

Why should there be laws regulating the practice of law? Is it to protect the intelligent and enlightened lawyers of the land from the chicanery, the ignorance and the unscrupulous greed of charlatans and mountebanks? No. The lawyers of worth and attainments ask no individual protection, but they do ask that society be protected from the wiles and the machinations of adventurers; that the uninitiated and the unlearned be secured against the ignorant blunders of uninstructed and unqualified attorneys, and that the courts of the country be rid of those whose vexations, blunders and unwarranted ignorance impede the course of justice. Why should there be a law regulating the practice of medicine? Is it for the purpose of protecting the scientific and thoroughly qualified physicians from the quack and the nostrum vender; to fortify intelligence and knowledge and experience against cupidity, ignorance and empiricism? No; the honest physicians of the State disclaim any such intention. They ask no special

protection; no class discriminations, but they do ask that the lives, the health, and, we had almost said, the private morals of the citizens be secured against the ignorance, the inexperience and the avarice of those who are not possessed of the attainments necessary to an understanding of the great science of human life. They ask only that all those admitted to practice medicine in this State be reasonably familiar with those great principles of medical science which underlie and are indensable to an intelligent discharge of the duties devolving upon the practitioner. And this they ask, not in the name of any school of medicine, not on behalf of any class of physicians, but in the name of humanity, and on behalf of those great public interests whose preservation it is the duty of all enlightened legislation to advance and secure. To be sure, laws of this nature cannot fail to have a reflex influence in elevating the tone and securing the respectability of the profession to which they are destined to apply, but the attainment of such an end in any of the learned and honorable professions is a "consummation so devoutly to be wished for," that an effort among the members of those professions to realize it, can hardly be ascribed to narrow or selfish motives. Besides, it must not be forgotten that there is a moral and politic reason for the passage of this law, aside from the merely utilitarian argument which has society at large for its object. It is the duty of government and of society, through its representatives, to so regulate and restrict every trade, profession and calling, that, as far as practicable, honest *merit* shall be rewarded, and genuine worth be protected against the encroachments of dishonesty, ignorance and laziness. In this sense it may indeed be said that laws like this are intended to protect the profession upon whose members they operate; but it can hardly be asserted that the profession demands such protection, since the first principles of social and political economy indicate its necessity and the first dictates of equitable reason respond to the indications. The passage of these laws is a *duty* incumbent upon the legislator, and not a *privilege* claimed by the profession.

These points have been adduced to remove, if possible, the prejudice existing in the minds of many, and very unjustly so, against the enactment of laws like the one under discussion. This is not special or class legislation in any sense of the word, and we trust a careful consideration of the foregoing remarks will suffice to bring about, in all candid and impartial judgments, a recognition of the public and universal application of the proposed act, and its intimate and vital relation to the best interests of society. It is with the belief that such will be the conclusion of all unbiased minds, that we now approach the discussion of the different provisions of the proposed bill.

And we will first consider the change before alluded to, as to the criterion necessary for qualification to practice medicine, in any of its branches or departments, in this State, viz.: the discarding of medical diplomas as in any sense evidence of a man's fitness, and the substitution in all cases of a thorough examination before an examining board. Although this provision may, to some, seem at first glance to involve an injustice to those who

have undergone the labors and fulfilled the requirements necessary to obtain a diploma from a first-class medical college, yet we cannot believe that any one, after a careful and considerate survey of the field, will detect the slightest injustice, or anything in the nature of an implied indignity in the provision before us. The object of the act is to establish a uniform, equable and unavoidable criterion by which to determine the qualifications of those who shall practice medicine in this State. That it should possess the features necessary to secure this end has been the object of those who framed it, and confident that they have accomplished their design in the best practicable manner, they invite attention to the following facts: The supposed value of a diploma is based upon the belief that its owner possesses the merits and is instructed in the knowledge therein described and set forth. That it affords a presumption to that effect cannot be denied, but that it furnishes anything stronger than mere presumptive evidence will scarcely be maintained by any one familiar with the history and *modus operandi* of literary, professional, or other institutions in the habit of granting such documents.

The most that can be said of these instruments is that they afford evidence of the owners having enjoyed the advantages necessary to acquire the knowledge for the possession of which they profess to be testimonials; but that they are vouchers for the manner in which those advantages have been *employed* cannot for one moment be affirmed. All college men are familiar with the fact that there are dozens of persons graduated yearly from the institutions of literary, classical and professional learning, who do not possess the qualifications ascribed to them in their diplomas, but who have by dishonest means, by the system known as "cramming," and by the carelessness unavoidable in all large colleges, been able to secure an endorsement to which their real worth and attainments can furnish no title. Yet these are the very men who flaunt their diplomas in the face of the world, and whose true merits are sought to be veiled by the bits of parchment so studiously put forward as claims upon public confidence and patronage. This is true of the very first-class institutions of the land, and obtains with reference to the very highest and most reliable colleges in the country. What then shal. be said of that large class of inferior and worthless institutions whose advantages, when enjoyed a id improved even to the highest possible extent, do not fill the measure of respectable scholarship? Almost every State in the Union has one or more of such, whose claims to rank as colleges are absolutely absurd, and whose *alumni* cannot be dignified with the names of graduates. To show the comparative worthlessness of the medical diplomas granted all over this country, as compared with the higher standards of medical instruction, it is only necessary to record one fact: Germany, with a population greater than the United States, graduates annually three hudred doctors, while we, in the same length of time, turn out three thousand—ten times as many. This can be easily accounted for when it is remembered that there are numbers of young men in this State, and in all the States, who are in the habit of reading medicine, attending

lectures, and receiving diplomas of graduation, all within the limits of one year. It is safe to say there will be no change for the better so long as the State authorities recognize and endorse such sham education, and place society at the mercy of such tyros, upon the simple guarantee of an unreliable diploma.

It is not necessary to particularize in this matter. The observation and experience of every one are in support of the fact. There is yet another class of institutions, by no means insignificant, or to be overlooked in their pernicious influence, and confined almost entirely to the medical profession, whose certificates of graduation are the subjects of barter and sale. For a paltry sum of money and a few weeks' time, a diploma may be procured whose validity cannot be questioned in any other way than by the means proposed in this act, viz.: by requiring such men to pass a thorough examination before being allowed to begin the practice of medicine. With such a law, the profession will no longer be disgraced, nor society burthened, with such charlatans. It is impossible to be rid of this class of unreliable and dangerous practitioners in any other way, for article 15, section 31, of the new constitution prohibits discrimination in favor of any school of medicine, and hence it would be impossible to distinguish a diploma of a first-class college of medicine from that of one the qualifications of whose graduates do not entitle them to the privileges of respectable physicians. Besides, as we have already seen, the diplomas of none of them afford any definite, uniform or reliable test of the attainments and merits of those having them. Such being the case, the only practicable means of obtaining the end in view is by the mode provided in the proposed act. The discarding of medical diplomas as certificates of qualification to practice medicine in Texas cannot he regarded as casting any imputation upon the renowned and justly esteemed colleges of the country. On the contrary, those very institutions will hail with pleasure the passage of such a law, since it gives them an opportunity to demonstrate their superiority over their inferiors. Instead of being a discouragement to the scientific and thoroughly instructed graduates of the great universities of the North and East, it will be an inducement to all such to seek a State where merit, and not cupidity, is given the preference, and where a man is judged by the extent of his real attainments, and not by the fictitious standard of an unreliable certificate. They are, by this act, raised to an elevation suited to their superior acquirements, and are no longer degraded to the level of that indiscriminate horde whose diplomas would otherwise entitle them to the same consideration under the law, whether bought with money, undeserved by merit, or procured without labor and without knowledge. Instead of reproaching the State of Texas with doing injustice to their graduates, the higher and better medical colleges will thank her for having "cut them loose from this body of the death," and guaranteed to them a position and an advantage they have never elsewhere enjoyed. And thus, while we contribute our effort toward the general advancement of learning in the colleges, we extend to the really qualified, scientific and educated physi-

cians, an inducement to come amongst us, which far from considering it a humiliation to accept, they will speedily and thankfully embrace, as a *bonus* upon enlightenment and knowledge, and a death blow to ignorance and empiricism. Such a provision is, moreover, but simple justice to those whose limited fortunes have prevented them from attending our medical colleges, but whose attainments may be equal and often superior to those whose diplomas secure them an immunity from criticism, thus putting a premium on superficial scholarship. Is it just that one whose pecuniary circumstances have excluded him from enjoying the advantages of a collegiate training should be subjected to the additional inconvenience and humiliation of passing an examination, while his more favored, but less qualified, associate passes free from scrutiny or inquiry by virtue of a diploma, bought, perhaps, for money, and in any event, affording no positive and reliable test of the man's real ability? We say no; place them all on the same footing, and let merit, knowledge, science and honest labor determine the fitness of those in whose keeping are intrusted so many of the most vital and sacred interests of society. It is a fact not sufficiently recognized, though daily gaining in strength and general acceptance, that the spirit of democracy, and the genius of republican institutions, require that every man shall be allowed to follow that calling toward which his tastes may incline him, and for which his abilities fit him, under as few restraints and burdens as possible. The only question with government should be, "Is he fitted to exercise his calling with safety to society?" and it is a duty incumbent upon government to inquire into his qualifications with rigorous scrutiny—especially where the calling is such as involves the life and health of the citizen.

Further than this, government has no right to go, but, on the contrary, it should endeavor to remove every barrier in the way of a free exercise of the calling to which every man's inclinations may attach him. It certainly ought to recognize no such fictitious and arbitrary standard as a college diploma, the possessions of which is no evidence of merit, and whose absence is often the result of pecuniary embarrassment, or other unfortunate circumstances, which should command pity and respect rather than invite scrutiny and suspicion.

It may be objected to the summary disposal of diplomas, as contemplated by this act, that it renders unnecessary the attending of medical colleges at all. and that it would be as well that young men intending to practice medicine in this State, should discard the idea of a collegiate course, since it confers no benefits and secures to them no privileges they would not have if able to pass the required examination, whether they had received such training or not. This objection overlooks the fact that attendance upon medical lectures is simply a means for attaining a given end, viz.: the proficiency in the science of medicine, and that such attendance, or its fruits in the shape of a diploma, is of no importance, *per se*. Men attend medical colleges, or any other institutions of learning, not for the sake of getting diplomas, or for the grandeur and reputation of such attendance, but be-

cause a college course is the recognized means of acquiring the desired knowledge in the speediest, most thorough and most satisfactory manner. If the time should ever come when men are convinced that they can acquire knowledge as readily and as effectively in an office as in a lecture room, then our colleges will cease to exist, and our lecture halls will be vacated. But as long as it remains an established and accredited fact that such is not the case, there will be no danger of discouraging college education, or decreasing the number of those who will avail themselves of its advantages. On the contrary, laws like this will lead to a clearer appreciation of the real intent and purpose of colleges, and bring about a corresponding thoroughness in their mode of instruction. Besides, the *animus* and tone of the medical profession itself will regulate this branch of the subject in a way beyond the influence or control of any legislative enactment.

Thus much for the first essential feature of this act, and a candid consideration of the various arguments adduced cannot, we think, fail to convince everyone of the salutary nature of the provision. It is dictated by a sense of fairness and justice; it is indicated by a regard for the facts of the case, and is, in our opinion, indispensable to the establishment of a proper standard in the medical profession, and to the efficient protection of society at large.

We pass next to a consideration of the second proposed alteration in the law now in force, viz.: to place the appointment of the "board of medical examiners" in the hands of the district judge instead of with the county court, as is now the case. And we apprehend there will be small necessity for a lengthy discussion of this change, as its wisdom is apparent on a very slight consideration. The object should be to obtain the very ablest physicians in the State as examiners, and it is eminently desirable that no private, personal, or interested motives should exert an influence in the matter. It cannot fail to be evident that the district judge, being in almost every case a man of greater ability, wider experience, and from the very nature of his office, and the mode of his election, further removed from local and private influences than the county court can possibly be, is a fitter authority to attain the end in view. He would, furthermore, have a wider field from which to select the examining boards, and would necessarily be more apt to choose abler and better qualified men than could probably be chosen within the limits of a single county. It should, moreover, be remembered that the great majority of the practicing physicians of the State have already qualified for practice under the provisions of the old law, and hence there is no longer a necessity for so many examining boards.

To extend the jurisdiction of the boards over larger areas than judicial districts; *e. g.*, Congressional districts, as has been proposed by some, did not seem wise to the framers of this bill, for the reason that the members will, in all probability, be appointed from different towns and counties, and being, from the very nature of their qualifications, physicians of prominence and extensive practice, it would involve an outlay of time and mon-

ey to attend the meetings and conduct the examinations, which such men could ill afford, and would scarcely consent to make.

It has also been suggested that the appointing power be placed in the hands of the physicians themselves, *e. g.*, with the State Medical Association, or the county societies. But this would frustrate the very design and object of the bill, and be a curious anomaly in the art of legislation. This law is for the protection of society, enacted by the agents and representatives of society, and to place the exercise of one of its most important functions in the hands of the very profession whose qualifications and fitness it is proposed to regulate, would be to surrender the right itself, in virtue of which the legislature had passed the law, viz.: the welfare and protection of the citizen. To pretend to regulate and restrict the practice of medicine, and yet place the efficient means of doing so in the hands of the physicians themselves, would be a very singular, not to say absurd proceeding. And when it is further remembered that the State and county medical associations embrace and represent but a minority of the medical profession in the State; that two-thirds of the counties have no societies and are not represented in the State Association; that the last named body is, in its very nature, a popular and somewhat irregular assembly; that it would be an almost impossible task for it to seek out and appoint the best qualified men in the different counties and districts. When all these things are taken into account, the unwiseness and utter futility of vesting the appointing power in such hands, cannot but be evident to every one.

In view of the above recited reasons, the provision as embodied in the act as presented, is the safest, the fairest and the most satisfactory manner of disposing of this branch of the subject.

The third point of difference between the act now proposed and the present statute is the specific statement of the subjects to be embraced and covered in the examination for admission to practice medicine in any of its branches or departments in this State, viz.: that it shall be the duty of the examining board to examine all applicants, whether furnished with medical diplomas or not, upon the following named subjects; to-wit: Anatomy, physiology, pathological anatomy and pathology, surgery, obstetrics and chemistry.

A somewhat detailed discussion of this provision will suffice to demonstrate its wisdom and necessity. Every science, whether in its complete or formative stage, has certain great elementary truths and fundamental principles, in the light of which all subsequent investigations must proceed, and on a recognition of which any and all future deductions must be founded. These are established and accredited facts, and admit of no further doubt or discussion. All valid claims to proficiency in any science must be based on an intelligent understanding and appreciation of these great postulates or finished truths. This is eminently true of the science of medicine. The human body is composed of certain organs and tissues, whose conformation and structure are the same in all ages and in all normally developed individuals of the human species. These organs, tissues

and structures were destined, shaped and adapted to the performance of certain fixed and unalterable functions, and they are found in every case of healthy existence, to perform those functions without room for speculation or cavil. When the human body ceases to be in a healthy normal condition, the organs and tissues involved undergo a change or deterioration, and the normal functions of those organs are correspondingly deranged and distorted. These are facts as well established as the truths of mathematics or mechanics, and it matters not to what school of medicine a man may belong, it is immaterial what peculiar views eh may entertain and practice in regard to the *treatment* of disease, or the efficacy of particular remedies, he must acknowledge the validity of these truths; and he is not competent or qualified to entertain an intelligent opinion on the subject unless he is familiar with them.

Now, anatomy treats of the structure of the human body, its various organs, tissues, etc., and their position, conformation and normal condition.

Physiology treats of the functions and uses of these various organs in their natural and unaltered state. These two branches may be said to comprehend the science of the *healthy* human body; and inasmuch as one must understand health in order to detect and relieve disease, they lie at the basis of medicine, and are indispensable to anything like a knowledge of the science. As we have before remarked, it is a question of no importance what school of medicine a man may embrace, it does not affect his relation to these two branches of medical instruction. Next we have pathology, which treats of the organs of the human body as altered, deteriorated or distorted by disease, and pathological anatomy, which describes the corresponding change or derangement of the functions of those organs. These two may be said to embrace a knowledge of the *diseased* human body, and a familiarity with them is necessary to be able to detect and combat disease. And here again it is an immaterial question to what sect of physicians a practitioner may belong; or what his special views as to treatment may be. When an organ is attacked by disease, it is changed in some way, and its proper function and use is thereby impaired or disordered. These changes and disorders are subject to laws as immutable and as fixed as those which obtain in health. The morbid symptoms of a given case never change, and are subject to no question or speculation. It is simply a matter of individual skill and ability to be able to detect them, and separate them from concomitant and resulting symptoms.

Two other subjects embraced in the examinations are surgery and obstetrics, whose meaning is sufficiently clear to need no definition. Suffice it to say they are among the indispensable requisites to a respectable knowledge of medicine; and like all the other branches included in this provision, are essential components of the great groundwork of medical science. Neither do they involve a discrimination between different schools [illegible] systems of medicine. The mode of performing a surgical op[illegible] same for all men. A limb must be amputated, a cataract [illegible] tumor excised, according to the same rules and with [illegible]

whether the operator be an alopath, homeopath or eclectic. The like is equally true of obstetrics and midwifery.

The last named subject in the examination is chemistry, of which it is needless to say that no one should be permitted to administer drugs and medicines, unless he is familiar with their chemical properties, combinations and effects. It may also be asserted that its principles are the same to all men, be they physicians or not, so that there can be no complaint as to the discriminating effect of this provision.

In the foregoing discussion of these different subjects, it has been our object to show that they are all indispensable elements and fundamental requisites of a proper qualification for the practice of medicine in any of its branches or departments. It matters not if a physician be a *specialist*, confining himself to one of these subjects, and not claiming or pretending to be familiar with the others. Aside from the fact that all such have placed themselves outside the legitimate pale of the profession, and should always be viewed with distrust and suspicion, it is impossible for a man to have an intelligent knowledge and appreciation of one of these branches without the others. They treat of subjects so intimately and inseparably blended, that they cannot properly be considered apart. The human body is a complete machine, and no one is fitted to treat one of its parts without understanding them all.

We have furthermore shown that this provision works to the disavantage and attacks the peculiar tenets of no school of medicine, but that it embraces subjects common to and recognized by them all, and that no person is qualified to practice medicine according to any known rule or standard who is not familiar with the truths and principles herein prescribed.

It may be asked, why fix upon any special subjects for examination? Why not leave it to the discretion of the examining board? We might ask in reply, why is it necessary to establish any special course upon which the applicant for admission to practice law shall be examined? The answer to both is the same. For the simple object of obtaining a uniform, unvarying and definite test of the applicant's qualifications. Such object would be most certainly defeated by making its accomplishment a matter of discretion with a number of examining boards, whose tastes, qualifications and organization would necessarily be varied and often conflicting.

We have already noticed the only exception to the rule as provided in the case of those whose established and accredited ability are known to the examining board. With this proviso, we cannot but deem the proposed plan as perfect and as satisfactory as it is possible to establish.

It is proposed, in the next place, to make the examination fee fifteen dollars, instead of ten dollars, as is now the law. The necessity for this is apparent when it is remembered that the board of examiners are required to meet semi-annually, at some central point in their respective districts, which will, in almost every case, necessitate the traveling to such point by one or all members of the board; and the sum named is certainly not too much to defra[illegible] xpenditures of time and money. The

applicants will always be few in number, and often none at all, and the fee will have to be divided among the three or more members of the board.

The last feature of the bill is in the nature of a *proviso*, and nothing more was needed to render this act extremely fair and equitable in its operation. The proviso is to the effect "that nothing in this act shall be so construed as to exclude or disqualify any person who may have been already qualified for the practice of medicine under the previous act to regulate the practice of medicine, nor to those who were engaged in the practice of medicine for five consecutive years before May 16, 1873." Thus all who have complied with the requirements of the old law are secured against inconvenience or expense under the new one; and the act is made to possess one of the most indispensable requisites to an equitable enactment, viz: that its force and operation shall be wholly *in futuro*.

We have now considered the more prominent features of this bill, and in view of the arguments and facts collated, we cannot but regard its wisdom and necessity as established beyond question. We have shown, in the first place, the expediency, the fairness and the necessity for laws of this nature, and that far from being special or discriminating in their operation, they are demanded by those great public and social interests for whose preservation it is the duty of government to provide. We have also shown that the test of qualification proposed is the only uniform, invariable and reliable criterion that can be established, and that it not only acts to protect society and elevate the standard of the medical profession in the State, but that it is also a step in the direction of encouraging genuine merit and rewarding real worth and attainments. It has further been evidenced that the attention in regard to the appointment of the boards of medical examiners will better secure able and efficient men, and lessen the chances of partiality and private influence. It was next demonstrated that the nature of the examination prescribed, while it works a hardship upon no class of physicians, and involves a discrimination in favor of no school of medicine, will insure the possession of a knowledge of those fundamental truths and elementary principles which are indispensable to any intelligent understanding of the science of medicine. And last of all, to crown the fairness and complete the equity of this act, it has been seen that it disqualifies nobody not now disqualified; that it contemplates no retrospective or meddlesome legislation, but that it is just to all and wholly prospective in its operation.

These arguments cover, and cover conclusively, all the essential features of the act, and a careful scrutiny of them will convince the most skeptical. With a firm belief in their truth and validity, the framers and friends of this bill commend it to the favorable consideration of the Legislature, confidently persuaded that the good sense and candid judgment of that body will arrive at but one conclusion in regard to it.

REPORT OF THE COMMITTEE ON STATE BOARD OF HEALTH.

To the President and Members of the Texas State Medical Association:

Your Committee on the State Board of Health ask to submit the following:

The necessity of a State Board of Health, and such sanitary laws and regulations as to prevent the wide-spread prevalence of such diseases as are, if not entirely, under our control, sufficiently so to justify active diligence on the part of the guardian[illegible] public health to secure these great preventives; and tha[illegible] physicians who are entrusted with this important duty [illegible] be men of science and education, are propositions too [illegible] the minds of regularly educated physicians (with none o[illegible] we consult) to discuss. The elevation of the standar[illegible] sion to the medical profession should be the constan[illegible] State Medical Association. No one should be a[illegible] with the lives of men until he has thoroughly comp[illegible] great subjects: the physical life of man, and th[illegible] property of each medicine in the dispensatory [illegible] admitting men who do not pretend to have ta[illegible] is dangerous. When we reflect that quit[illegible] come forth from regular schools have nev[illegible] ciency in practice, it becomes evident th[illegible] irregular practitioner be subjected to th[illegible] but also that our medical schools show [illegible] of medical study, as well as insist o[illegible] [illegible] past in or[illegible]

tle is not only between regular and irregular physicians, but between real ability and charlatanism. In this struggle no true man will hesitate as to what cause he will espouse.

Science and medicine should be united. Medicine should always be the practice of science in the particular direction of preventing and curing disease. A single discovery in science may introduce a new era in any of the learned professions. Before the announcement of Newton's law of gravitation, astronomy was the most conjectural of all the sciences, but with the thread furnished us by this patient observer we pass through the great labyrinth of stars and systems and suns, with that familiarity with which we traverse the grounds and halls and apartments of the old homestead. The discovery of the circulation of the blood, by Harvey, revolutionized the practice of medicine. Franklin flies a kite and lays a sure foundation for the great science of electricity, telegraphy and magnetism. These examples, while showing the great and beneficial results of patient observation and experiment, remind us also that there is still much to be discovered. A practical suggestion as to the probabilities of the future: May we not, by observation of the winds, the degree of moisture, the temperature, etc., the luxuriousness of vegetable growth, and all the elements which make up what might be called the climate of any particular year, predict, weeks before, the probable prevalence of yellow fever or cholera? If so, what a blessing it would be to the race. Savannah, Memphis, Shreveport, and other places, are still fresh in our memory; their terrible sufferings urge us to prevent, by sanitary regulations and scientific observation, the possible recurrence of such scenes of horror and devastation in our own great State.

Whilst we would not reflect on the wisdom or motives of our last legislature, yet we think, owing to the imperfections of human nature, they signally failed in the late law regulating the

practice of medicine to meet the emergency of our rapidily growing State, or to subserve the purposes for which they designed it, or to elicit the co-operation of the medical profession, all of which are essential to make it a success and a benefit to the State, for as the facilities for immigration are increased, so will there be for the spread of pestilence and disease. We very much fear that the law, as it is, instead of more closely uniting us in the ethics of our noble profession, has proven an element of discord and division. Therefore, we cannot in too strong terms urge union and harmony on this great and vital question. Let it not be said that the Texas State Medical Association has broken down the wall of separation between us and irregulars, and admitted them into professional terms of equality with us; but rather let it go forth that strength and permanency has been added to the partition. Let the world see that we are advancing instead of retrograding. The wants of our rapidly growing and proud State demand that we should not rest until such sanitary laws and regulations in the practice of medicine shall have been adopted as will result in the greatest good and protection to our people. The voice of humanity comes to us imploring protection.

Inasmuch as there will not be a meeting of the legislature until after our next annual convocation; and in view of the great importance of this subject, and in order that ample time may be allowed to investigate different plans, we would ask for further time, to report at our next annual meeting; with such additions to the committee as you may think proper to make; or perhaps to discharge your present and appoint a new committee.

Respectfully submitted.

E. P. M. JOHNSON, Chairman.

PRESIDENT'S ADDRESS.

Ladies and Gentlemen:

In accordance with the custom of my predecessors, I appear before you this evening to close my labors as the chief Executive officer of the Texas State Medical Association. This custom makes it my duty to address the general as well as the medical public; and however inexperienced or deficient I may be in the art of public speaking, I confess I approach the task with a sense of relief, if not of gratification, because it marks the termination of a period of care and responsibility that might have been better borne by other shoulders. But I have other sources of gratulation, beside which my relief from the duties and responsibilies of the presidency is of small importance. Proud as I may have been of the preferment which the suffrages of my colleagues a year ago bestowed on me, I am still more proud of the prosperity which this assemblage of representative medical men, from every part of the State, in despite of adverse circumstances, betokens. And it is no less a source of congratulation, to note in this assembly such an array of grace and beauty, and strength and intelligence, from the drawing room and the parlor, and the counting-house and the office, giving encouragement and support to the great work we have inaugurated.

But, ladies and gentlemen, I must forego my own felicitations and address myself to the duty of the occasion—your entertainment for an hour.

Pursuant to this thought, there is perhaps no subject to which I can invite your attention, that is of more importance, both to

the general and the medical public, than the *education of our profession.* Well worn as the theme is, and thoroughly as it has been discussed, there is still much that may be said of it, which, although not new, ought, in view of the circumstances around us, to enlist the attention and fix the interest of every intelligent citizen of the State.

The subject is important to the medical public, because upon the quality and the quantity of our education depends the ability of the individual practitioner to bear the responsibilities and discharge the duties of his position; and unless it is both liberal and comprehensive, he can no more fulfill the just expectations of his patrons than can the veriest charlatan that blandishes his delusions and semblances in the face of ignorance and superstition. It is more important still, because the interests of the profession—the immediate pecuniary interests of the members—demand superior attainments; and the ratio in which they are possessed in any given instance is generally a pretty fair indication of the measure of the individual's worldly prosperity.

It cannot be concealed that public confidence in the knowledge and intelligence--the *available skill*—of our profession, in the treatment of disease, has, in this country at least, long been on the decline—is indeed, in some sections, greatly impaired. Quackery and empiricism rear their brazen front on every hand, and in many places are supported and encouraged, not by the vulgar and ignorant alone, but by respectability and intelligence—in semblance—and in one recent, notable instance, in our own State, by the rank and power of judicial dignity. But worse than this, it is becoming more and more evident, day by day, that there is a growing disposition upon the part of our legislators, both State and national, to drag us down into a degrading rivalry with hucksters in superstition, and mercenaries that speculate in the credulity and misfortunes of ignorance. It is, there-

fore, pre-eminently important to those of our profession who love it for its own sake—who venerate it for its antiquity, and honor it for the unselfish devotion with which its disciples, in the successive ages of its history, have conducted it to its present high place in the social organism, that it should be sustained and advanced by a liberality and comprehensiveness of education commensurate with its lofty aims and the advanced state of the civilization of the age in which we live, and in keeping with that accorded to other branches of philosophy; because it is the only means by which we can avert the terrible calamity just indicated.

It is important on the other hand, to the general public, because of the varied and vast amount of the duties it imposes upon the medical profession. Truly may it be said, that "life, liberty and the pursuit of happiness" are constantly committed to its care and discretion. Not only are the ordinary ills to which flesh is heir intrusted to the physician's skill for relief, but in cases of contagious disease and epidemic visitations, of however malignant character—when pestilence is abroad, and death, in its most appalling forms, claims its victims in more appalling rapidity—your God and your physician are your sole hope. The individual in whom reason totters upon its throne, and the confirmed maniac, are alike dependent upon his resources. The destiny of the victim and the criminal depends equally upon his skill; and the demands of justice would, in countless instances, go unsatisfied without his aid. There is no interest in all the complex relations of life that is not involved in the competence of the physician. The affections of families, the perpetuation of valuable lives, the support of towering genius, and even the stability of governments, are subject to it. From the hovel to the palace—from the serf to the prince—in life's vicissitudes, issues are staked upon his skill, than which earth's most

splendid prizes are no greater; and yet, passing strange as it is, the masses of mankind pay but little attention to the character of the education of that class of citizens upon which these grave responsibilities rest — responsibilities so vast in their consequences, and overwhelming in their magnitude, that words are inadequate to express their measure; and have, in truth, made no provision to secure it, and habitually look upon their physician, rather as one supernaturally endowed, or divinely inspired, than the patient and laborious student of nature, that the attainment of eminent ability requires he should be.

This condition of public sentiment with respect to the medical profession obtains to a far greater extent here in our own country than it does in Europe or other portions of the civilized world; but there is no lack of evidence that our profession is illy supported elsewhere as well as here.

Let us glance then, briefly as we may, at the origin and nature of our profession, its progressive development and the character of the education accorded to it under existing circumstances; and to some extent that which should be provided for it.

The science of medicine, like every other human enterprise, finds its prototype in the progress of individual being. Beginning in the feebleness of infancy, he passes through the light-hearted period of childhood and thoughtless youth, dependent upon foreign sources for fostering care and support necessary to protect his existence and secure its development; with expanding powers, he emerges into manhood, and with fully developed energies, the fullness of maturity crowns his life. A little while, and the decrepitude of age creeps on, and in the natural course prescribed for him, the forces of his nature are exhausted, he fulfills the law of his destiny—the mandate of his Creator is accomplished—and his being in the world is terminated by the dissolution of his mortal frame, and the restoration of its elements to their original condition.

Socially and politically, the condition of our race was equally helpless in its beginning. It has left us no memorial of its history or its thoughts, for it was incapable of making a record of the simplest idea; all are buried in the profound obscurity of the far distant past. From the age of incapacity, it progresses into the age of fable and superstition, in which ignorance riots in the wild conjectures it substitutes for facts. Time passes, and the ungoverned savage is gradually developed into the civilized man, and the rude polity of barbarian tribes is slowly shaped into the complex machinery of cultivated and refined communities; and it is in the revolutions of ages yet to come—in the far distant future alone—that we may reasonably look for a perfect civilization—the exaltation of the intellectual and moral faculties—the establishment of reason in the ascendant over brutal passions and organic instincts. For, although too many of us are accustomed to regard the present as an age remarkable for the perfection of its civilization, it is impossible to regard it calmly and dispassionately without being impressed with the numberless traces of barbarism that remain stamped upon the customs, opinions, impulses, and especially the political machinery of the age. The doctrine that "might is right," is not yet obsolete.

While the noble and more exalted faculties are made subservient to the inferior and debasing; while force and fraud are substituted for reason and right; while differences of opinion and collisions of interests are determined on the field of battle by the conflicts of opposing hosts; while right and truth and justice are interpreted by sophistry and determined by fraud and force; while the energies of society, the wealth of nations and the strength and determination of governments are almost wholly directed to the perpetuation of the power of the few over the many—the devising and perfecting of means for destroying

on at any cost, will supplant the general diffusion of ledge. Intellectual advancement will be retarded and moral ith will, in most markets, be at a heavy discount; and impar-al truth can not restrain the verdict that man, though less a savage, has not yet passed entirely beyond the limits of the savage state—though a reasoning being, he can scarcely be fairly considered a thoroughly rational one. That perfection which destiny has in store for him, and of which he evidently possesses the fundamental elements, can only be evolved in the slow progress of the time to come, as his present advanced state has been in the time that is past. It may even now be seen, dimly figured in the far distant and obscure vista of remote ages; but it can never be attained until the good and the true, and the beautiful and the grand, implanted in his soul, and but now feebly germinating, shall be fully expanded and developed—until the empire of reason is established, and he becomes the master, instead of the slave of his appetite, his propensities and his passions; for then, and then only, will the blaze and glory of intellectual light leave error and falsehood no spot wherein to harbor.

But this is a digression, not wholly foreign however. For although man's organization will never be changed, the progressive development of his faculties towards the perfection of which they are capable, through the cultivation of his physical, intellectual and moral nature, is unquestionably, to a great extent, subject to his own control; and as man is what knowledge makes him, he will inevitably attain, in the course of time, that degree of physical, social, intellectual and moral excellence of which he is so clearly susceptible, and for which he is so unundoubtedly designed. The rate of his progress in this achievement of his destiny depends upon so many contingencies—is so hampered by the barbarian instincts from which his emancipation is not yet accomplished—that conjecture can fix no time for

its consummation. The transcendent powers of our most brilliant intellects are devoted to other objects. The brief span of human life is too short to afford them a field to gratify their ambition in such pursuits. Its immediate rewards are not sufficient, for any but the pure and unselfish philanthropist. But the rapidity with which this social elevation and intellectual and moral exaltation might be advanced by concerted action and consistent effort is startling to the imagination to contemplate. Let us try, for a moment, to conceive the vast results that flow from the diversion of the enormous sums—annually expended by the nations of the earth in the intrigues of diplomacy, the maintenance of armies, the erection of forts and the support of armaments, and all of the other means of sustaining political power and waging destructive war—to the cultivation of the mind, the development of the faculties and the establishment of the proper equilibrium in our organic composition. What, in the course of a few centuries—a single century, yea, a generation—would take place. The tardy progress of Darwin's evolution would compare with the result as the stage coach to the electric telegraph.

But these reflections should have accrued more as a result of what I had proposed to say on the subject of discussion. Let us return, therefore, to the illustration with which it was introduced.

All of the arts and sciences—every creation of human genius, instigated by intuitive tastes, or extorted by instinctive wants, exhibit the same order of progression. Rude, undigested and incapable in their origin, they have been advanced towards perfection, or have attained it, with varying degrees of speed, some achieving complete development, while others are left far behind in the struggle with the obstacles that obstruct and retard their progress.

The history of medicine—its gradual development into its present proportions, in despite of innumerable difficulties both

natural and artificial—affords an apt illustration of the general idea, thus imperfectly conveyed. In its primitive state it did not form an independent profession, but like man in the feebleness of his infancy, it was incapable from its deficiency of power and dependant upon foreign sources for support. As it grew into the proportions of youth it became the *protege* of the priesthood, and from this source it not only received protection and support, but cultivation and advancement was unquestionably conferred by observations of numbers of the sick who sought the spiritual or temporal aid of the Fathers in Religion. Later, it reposed, for a time, in the embrace of the Grecian philosophy and was indebted for its fundamental dogmas to the doctrines embodied in the speculations and the science of that highly endowed race and intellectual age. Hippocrates has the reputation of having separated from its guardian and guide in this instance; and from thence it was plunged into the abyss that engulphed the world during the dark ages, and magic astrology, cabalism and incantations furnished the philosophy and its practice. Escaping from these absurdities, it took refuge in, and sought assistance from, the visionary speculations and ill directed efforts of the Alchemists. It then became a department of physics and mechanics, after which it was coupled with the wild metaphysics and rude chemistry of the age. It has been a doctrine of humoralism, solidism and vitalism, alternately, while dogmatism and empiricism have always been too strongly impressed upon it to escape notice.

From this imbecile dependence on other departments of science for its principles, medicine has now escaped. Having attained maturity, it has assumed an independent place in the circle of the sciences, and the rock upon which its foundations are laid, is as immutable as the rock of ages. The obstacles to progress that it has encountered in its long course, have been innumerable.

The struggles in which it has been involved have been fierce, without a parallel in intellectual warfare, and revolution after revolution constitutes the principle landmarks in its history. But each obstacle surmounted, has added a mass of new facts to its store; every struggle terminated, has developed more comprehensive principles, and every revolution has eliminated hosts of errors.

Medicine, then, is a science, broad, catholic, comprehensive; and perhaps, the most difficult of any in the whole circle, created by the inventive genius of man for his defence against the most desperate evils that assail his existence, and but too frequently, cut short his career or blast his prospects for happiness in this life. It is difficult, not only from the enormous multitude of its facts, their complexity and obscurity, but the profundity and abstruseness of its principles; for, although a science in the common acceptation of the term, it is by no means a perfect one; indeed, it can scarcely be claimed that its progress has been equal to that of many other departments of science, though the immense stride it has made in the last quarter of a century with the improved appliances and increased facilities for investigation, promises a far more rapid progress in future.

Medical education then, consists in the acquisition of a knowledge of the facts and the principles of the science. Its successful application to practical uses renders an intimate knowledge of both essentially necessary. Its facts should be verified and incontestibly established by experiment and observation—the only means by which actual verification is possible. The facts established, the evolution of the principle by which they are governed, naturally follows. The only formidable sources of error in medical or any other science, is in the assumption of falsehood for facts. Let the facts be real, and philosophical minds will never fail to

establish the principle involved in their relation. His generalization is perfect, and sound theory is the result. A genius of this character trained, as would be every man who aspires to look into, comprehend, pronounce upon and administer the laws of life, will immediately perceive the similarities and dissimilarities of things—embrace, analyze and distinguish the slightest peculiarities of objects, comprehending the whole array in one view, recognizing the point to which innumerable phenomena converge and finally meet in perfect accord. Their general relation, their reciprocal bearing and mutual dependence, as well as the laws or causes regulating their production, are appreciated. This power to concentrate the faculties and direct the senses to take cognizance of and examine facts, confirmed, conceded, and their arrangement, classification and generalization is easily accomplished. The facts are then supported by principle, theory is established, science is developed into a speculative philosophy and a practical art.

Facts and principles in any science are but the type of the body and soul in man. The facts are the material substance; the principles are the spirit which animates that substance and imbues it with the character of a living body—science. The mass of facts pertaining to any science must be taken cognizance of by the senses, reduced to order by the reflective faculties, and the relations of cause and effect discovered and established before there can be recognized as comprising science. Facts without this knowledge of their relations, is a mere chaos, void and without form, until the animating spirit of philosophy is breathed upon it; then light and truth burst upon it, the profound obscurity is dispelled; form, order and harmony rise successively into view and science is born into the world.

We perceive then, that the facts of a science are to be observed, verified and studied chiefly—aye, almost wholly—for

the purpose of elucidating the principles which govern or control them This is the only sure guide to their correct application in practice, and is pre-eminently true of medicine, in the practice of which, the ever varying complications of disease, in subjects of diverse constitutional peculiarities, continually call for new combinations of remedies and resources to meet their manifold exigencies. Yet, it is unhappily too true that a large majority of our physicians are simply routinists—practising our sacred calling as if it were a mere art—a collection of precepts and maxims and recipes that have been handed down from generation to generation, and that requires but little effort to master—an aptitude to commit to memory, to enable them to put it into successful practice. That this sentiment prevails to a very great extent amongst the masses of the people is evident to the most casual observation, and unfortunately it is not very rare in the ranks of our profession.

In this rapid sketch of the nature and necessities of our profession, I have sought to exhibit the character of the education it requires, rather than that which is usually accorded to it by the customs of most of our colleges. Let us now consider for a moment, this latter branch of the subject.

In a large majority of the "regularly constituted and legally established" medical colleges of our country, the course required and that impliedly assumed to be sufficient to qualify the student to take charge of the grave interests and heavy responsibilities involved, comprehend three years of nominal study, embracing attendance upon *one* brief course of medical lectures, *repeated*. No specific grade or standard of preliminary education, is required. The merchant's clerk or druggist's apprentice and small farmer's boy are admitted, on terms of an intensely democratic equality, to the supreme privileges thus tendered—

for a consideration. He first enters his name, as a medical student, in some reputable physician's office; reads a little, hunts and fishes a good deal, attends a course of lectures and returns to his preceptor with a wise look and assumption of dignity that entitles him to additional professional courtesies. Another summer is spent, in which he sees a few patients, if in the country, propably compounds a few prescriptions, after which the second course of lectures and the Doctorate in Medicine.

These courses of lectures are well described by Dr. Caswell, late president of the Rhode Island Medical Society. He says, "as to the plan of study, we all know that in most of them, it consists of attendance upon two full courses of lectures in successive winters. That is, the student goes over the same ground twice. All of us remember the months that we have spent in listening to lecture after lecture, hour after hour during the day, with attendance upon quiz classes in the intervals, the evenings given up to dissections, and with weekly or bi-weekly interruptions of the lectures to attend upon the clinics. * * Too much is crammed into the student's head to find any lodgment there. No time is allowed for arranging and digesting all that is forced upon him. Anatomy and physiology, chemistry, materia medica, theory and practice, surgery and obstetrics, have all been paraded before him, and he catches a glance here and a glance there. And as the matter now stands, this is for the strippling just out of the high school as well as for him who has gone through a college and already attended one or two courses of lectures."

That the few months thus spent in hearing lectures, and the limited amount of study usually accorded or endured to evade public censure, should be deemed a sufficient preparation to

authorize the student to enter one of the most recondite and responsible professions to which an enlightened mind can be devoted, is almost incredible. Nevertheless it is true. The colleges adopt it, the students accept it and parents approve it. The effects of such a loose and immethodical and unphilisophical method of teaching medicine, is not only a leading obstacle to its progress towards perfection, but it is a fruitful source of most of the other evils of which both the profession and the people have to complain. But there are exceptions to this general rule of teaching—unfortunately in both directions. To the credit of our profession, and as a boon to humanity, a few of our medical faculties look more closely into the preliminary qualifications of their pupils, give more extended courses of instruction and are more exacting in their requirements; while on the other hand, I regret to say, there are a few, very few, that have been even less particular—have been content to take their fees and confer their honors for attendance upon a winter and spring course of lectures, amounting, comprehensively, to about seven months of *quasi* study.

The baleful influence of such policy is immeasurable, and its authors merit the severest rebuke from every man who truly seeks to advance and perfect our knowledge—to elevate and dignify our profession. Such a policy can only serve to degrade and humiliate our noble profession, impair public confidence in its worth and encourage that kind of quackery now so rampant throughout the land, at the same time that it shames our institutions of learning and disgusts the best men in our ranks.

But no such policy can be long sustained. Society is awakening to the true nature of our science, and will not tol-

erate such incapable systems. Now that philosophy is no longer confined to the walls of chartered schools and sequestered colleges, but walks abroad in open day, permeating every grade and class of society; now that the human understanding is bursting the fetters of prejudice and will not submit to the unsupported authority of imposing titles and pretentious privileges, the consequences of such a system cannot pass unnoticed and uncondemned, however much its supporters may feel inclined to uphold it. Men already recognize the fact that medical skill is not a gift of nature or an accidental endowment—that it is the result of an educated and disciplined mind, acting upon comprehensive stores of knowledge, and that knowledge is the fruit of laborious research and incessant application; and without these the aspirant's claim for confidence is slender indeed.

This subject is not new to the medical profession. It has engaged the attention of our most profound thinkers and devoted disciples for many years past, and it is not long since it was elaborately discussed in the councils of the American Medical Association. A society of medical instructors was formed, and, what was conceived to be, the necessary steps were taken to elevate the standard of medical education. But so far as I am aware its effects were without result, and the association has ceased to exist. More recently it has engaged the attention of most of our leading journals, but with but little if any more success.

At one time it was conceived that the multiplication of medical colleges would, by conflict of interests or competition for public patronage, naturally tend to elevate the standard of medical education, upon the same principle that competing merchants are persuaded to try to keep better goods each than

the other, but if I am not mistaken, the shoddy substitute made its appearance in the medicine before it did in the commerce of our country. And it is now asserted by some of our most competent observers that the standard of acquirements for the honors of our profession have declined in the exact ratio of the increase of medical schools.

Since then, the masters in our profession, the colleges established to teach it, its most august association and the medical press of our country, have all addressed themselves to the task and failed to achieve this desired reform—a reform so universally conceded to be necessary. Where is the remedy for it? Shall we wait for the slow process of ordinary evolution to develope it—for the evils to work their own cure? Are we powerless in the premises?

I think not. Public opinion is the only force competent to achieve any revolution of established customs in a republican government, and public opinion is the source through which this consummation so devoutly to be wished for, is to be accomplished. Let the masses of the people comprehend what the science of medicine really is. Let them appreciate its broad, catholic, comprehensive character; the universality of its resources, and the profound philosophy of its knowledge, recognizing no sectarianism, acknowledging no dogma. And let them realize the extent to which their own weal or woe is dependent upon it, and they will speedily *force* the reform which the more legitimate agencies have so sadly failed to accomplished.

It would be presumptious in me to attempt to prescribe the details of the course of instruction that the present advanced state of medical science requires, where so many abler than I have treated the subject at such length and with so much effect. Involving, as it does, to the fullest extent, the faculties of per-

ception, memory, calculation, combination and induction, the student should by all means be throughly trained in the *art of studying*. While a classical education need not be insisted upon as an absolute essential, it would unquestionably be a great aid, but a thorough knowledge of the English language is indispensable. Words are the representatives of ideas, and, in medicine particularly, should be used with an accurate comprehension of their exact value. Man can no more determine the value of an arithmetical combination without a knowledge of value of figures, than he can decide the character of a case of disease, or combine in due proportion the elements of a prescription, without an accurate knowledge of the force of the terms in which the one is expressed or the other conveyed.

Next in order in this preliminary education is general mathematics, embracing the power of numbers—the equation of magnitudes—the laws of the forces imparting motion to bodies, etc., by which the mind is trained and every faculty likely to be enlisted in his future pursuits, developed.

With such a preparatory education, the obstacles and embarrassments incident to the more profound and complex studies involved in the science of medicine are greatly reduced, and if his future studies could be so arranged that he could prosecute them sequentially, with ample time to comprehend and appreciate them as he progressed, instead of having them crammed into him all at once, as is the case under the present system, the student might take his degree at the close of his term of study, with credit to himself, honor to the profession and benefit to humanity.

PREVENTIVE MEDICINE—AN ESSAY.

By RICHARD H. L. BIBB, M. D.,

Preventive Medicine is that department of science the object of which is to ascertain the causes of disease and preserve health by rendering harmless these causes. It is the source to which humanitarians look with hope for the most lasting and beneficent results that science can bestow upon mankind. Its consideration embraces the various influences which contribute to the moral and physical good of the people, as well as those which tend to moral and physical degeneration. As a protective institution, it seeks to propitiate and encourage the agencies conducive to, and compatible with, the general weal, while with equal assiduity it endeavors to repress and dissuade those of dissimilar ends. It invites legislation for the protection of society from the errors and vices of its members, and thus attempts national protection by subverting disease, in rendering harmless its avoidable causes; but its therapy, to be successful, *must, in large measure, consist of social improvement, universal education, and the dissemination of knowledge concerning the laws of health.*

As preliminary and essential to a successful and intelligent study of this very important and duly recognized branch of medicine, must be considered of first moment the Aetiology of Disease. The causes of disease are so multiform, so complex and so often associated in their action, it is frequently quite impossible to determine, with anything like precision, to what cause, or

combination of causes, a given case should be assigned. It could not be expected, therefore, that in an essay, did time or ability permit, that they would be traced out in minute detail. Hence for sake of brevity, and to fulfill the requirements of the present occasion, they may be conveniently arranged under the following headings: Hereditary Influences; Social Excesses and Immorality; Defective Sanitation; Specific Germs.

HEREDITARY INFLUENCES.—To these important factors in the causation of ill health and premature death, biologists and sanitarians have given, and continue to give, much thoughtful and patient investigation. While many of them refuse to accept in its entirety the theory of "Pangenesis" as announced by Mr. Darwin, many, if not all of them, admit the law of "Heredity," which some think it helps to explain so admirably.—(Wilson.)

With reference to indviduals, "Heredity" teaches that man is composed of his own, and ancestral peculiarities of habit, temper, disposition, anatomical conformation, and of mental and physical health and predispositon to disease, with but little, if any, regard for the "peculiar characteristics of the early progenitors of his race."—(Wilson.) In other words, the conditions of health of the offspring are predetermined by those of "its more recent ancestry" much more than by the remote; that is to say, by the parents more than by the grand parents. It also teaches that individual peculiarities of health, however much they may appear to differ from those of their progenitors, are not independent therefrom, but merely modifications of what existed in them, wholly or in part, in a latent condition.

Some of the most important conclusions arrived at, and those generally adopted by biologists of the present day, bearing on the influence of "Heredity" in the light of its causation to vitiated health, premature death, predisposition to disease, and its influence

upon the procreation of a vigorous progeny, are thus summarized by Dr. Wilson in his valuable "Hand book of Hygiene:"

1. The influence of both parents on the bodily constitution of the offspring is manifested in personal resemblances, such as statue, similarity of features, walk, gestures, color of hair, etc. Some of the children may bear a greater resemblance to the father, others to the mother; but it is rare to meet with any instances in which some distinctive characteristics of both parents cannot be found.

2. The influence of the other more immediate progenitors on the bodily constitution of the offspring, is manifested by the resemblances which constitute the phenomenon kown as Atavism, which may be explained in this way: A man, for example, does not inherit all the characteristics of either his father or his mother, and of those which he does inherit, only some are developed, whilst others remain latent and are probably developed in a brother or sister. His son, however, may in turn inherit the same characteristics, but with this difference, that those which were latent in the father become fully developed in him, so that he comes to bear a stronger resemblance to a grand parent or some other relative, as an uncle or aunt, than to his father or mother.

3. The influences of race or special type, in heredity, is manifested by the constancy of averages, under tolerably constant conditions, from generation to generation, and this not only as regards the whole body and its various component parts, but also as regards all the facts which are comprised in the wide range of social and vital statistics.

4. Deviations from these averages or from the normal type, although they are transmissible, cannot transcend certain limits. Thus, as regards size, the giant and dwarf form the extreme links

in the chain; and hence, in the procreation of individuals representing these deviations, the tendency to revert to the normal type is invariably manifested in the offspring.

5. As all forms of deterioration or disease may be regarded as deviations or perverted life processes, they are likewise subject to limitation in transmission, and there is the same tendency exhibited to revert to the normal type under improved conditions. Thus, all chronic diseases appear to be transmissible either as a morbid tendency or in their general form, such diseased heritage being well exemplified in the case of gout, scrofula, phthisis, syphilis, asthma, rheumatism and the various nervous derangements; *but by adopting suitable measures, the disease may be finally eradicated from the family or the morbid tendency be overcome.** It has also to be remembered that a hereditary disease or a morbid tendency may remain latent, like any other characteristic, for one or two generations, and become developed in the next.

6. Mental and moral qualities, if indeed they can be separated, are subject to the same law of heredity as other personal characteristics, with this important addition, that any vicious habit or tendency in the parents becomes, as a rule, intensified in some form or other in the offspring. With regard to the mental capacity, Mr. Galton has clearly demonstrated, * * * a man's natural abilities are derived from inheritance, under exactly the same limitations, as the form and physical features of the whole organic world; and Herbert Spencer, Morel, Dr. Maudsley and many others, uphold that a man's mental incapacity is similarly conditioned, that perversion or absence of the moral sense is, in effect, as much a portion of some men's inheritance as their height or weight. In no class of persons is the truth of this doctrine better exemplified than amongst habitual criminals;

*Italics ours.

their strong impulses and feeble wills, their vicious propensities and absence of moral sense, which constitute the fate of their heritage, render them more or less irresponsible members of society.

7. Any particular characteristic, especially if it be of the nature of a deterioration or taint, when common to both parents, is liable to be intensified in the offspring. It is on this account that marriages between blood relations are inadvisable, inasmuch as latent morbid tendencies, should they form a part of the organic patrimony of the family, are almost certain to become developed in the children.

If man's mental, physical and moral conditions are thus biased by hereditary influences, to the sanitarian it becomes a question of interest to ascertain what must be its effects upon the public health, of which that of an individual is but an atomic part. Briefly and imperfectly it may be stated that, inasmuch as one generation exerts such an enormous power over the general weal of its successors' habits, congenital or acquired, of good or evil tendencies, likewise with crapulous constitutions and diatheses become more and more permanent, the evil and degenerate to the exclusion of the good and healthy, which are developed but slowly and retained with difficulty, by reason of constant pollution from injudicious marriages and other like prolific sources, affect communities and nations as it does individuals and families composing them, in an ever increasing circle, until finally, from physical degeneration and decay, they disappear from among the nations of the earth.

Social Excesses and Immorality.—In this and other countries as well, these causes are numerous and many of them are sanctioned by laws enacted for public protection. They are but little under control of legislative enactments; hence in rendering them inoperative and powerless for harm "Preventitive Medicine" must, for the present, rely chiefly upon efforts of individuals,

prompted by a sense of duty and philanthropic desires. Among the most prominent and fruitful of these sources of ill health, and it may be stated, the most preventable when the proper measures shall have been brought to bear upon them, mention may be made of intemperance, immorality and excesses of every kind—injudicious marriages, idleness and depressing passions.

Intemperance.—An intemperate man is, most generally, otherwise immoral, improvident and guilty of other depressing and health destroying vices; consequently, his bodily infirmities are often attributed to them rather than drink. But, in general terms, it may be said that the ill effects of alcoholic potations are sufficiently pronouuced to render them of easy recognition by careful observers. And in order to call attention to its prominence in the ætiology of disease, the following opinions are cited:

In his report for 1871, Dr. Kirkbride states, that out of 3599 patients treated in his establishment, during a period of thirty one years, and about whom he had been able to obtain reliable information, 22 52-100 per cent. of the males "had become insane through drink." Dr. Lee analyzed in 1868, 14,941 cases of insanity, treated in sixteen American institutions, and concluded that twelve per cent. of the whole were due to intemperance. Dr. Poole believes that one fourth of all cases are due to this cause, while Lord Shaftesberry in his evidence given before the English Select Committee on Lunatics, in 1859, expresses it as his opinion, that fifty per cent. of cases admitted to English asylums were due to drink and cited Esquirol in support of his statement.

In addition to the foregoing, various other organs of the body are seriously injured and permanently impaired by this sad vice. The liver, kidney, heart, alimentary canal, arterial and muscular system, in turn fall victims to the fell destroyer; but it would be useless to undertake, did ability permit, an enumeration of the effects of intemperance upon public health and longevity. Suffice

it to say, that it is much vitiated thereby; and that the mortality is largely due thereto, there cannot be a shadow of doubt.

The growing conviction of the baneful influence of alchohol, to be observed among, and its gradual abolition by, the educated and intelligent, is alike an evidence of its evil and the *necessity of proper education*, to insure its complete abandonment, and in *process of time*, perhaps, its entire abrogation from the list of causes of diseases due to Social Excesses and Immorality.

Injudicious Marriages. — In this connection, reference is made to those who, from poverty, bodily infirmities, age, habits and consanguinity, are incompetent to rear a healthy family, and are therefore liable to perpetuate a race of invalids, to augment human misery, and swell the general death rate. This condition, it will be observed, touches the very cornerstones of national health, prosperity and growth, depending, as it certainly does, very largely upon the soundness of its individuals and their ability to procreate and maintain a vigorous progeny.

"Unthriftiness in marriage prevails most extensively amongst the ignorant and degenerate, or at all events," among those who are improvident and defective in forethought, regard for connubial responsibility and parental care. The frightful mortality among the children of this class, is thought not always due to insanitation, deficient food and clothing, but in numerous instances "to intentional neglect, amounting" oftentimes to criminal infanticide. The child is regarded as a cumbersome burden, and its death is therefore hastened, if it be not killed outright, by neglect to administer proper nutriment and other essentials of life.

There is another fertile source of mortality arising from injudicious marriages, viz: prolonged lactation. The parents, impecunious, or dreading the responsibility of providing for an increasing family, decide that the mother shall continue to nurse as

a preventitive of a subsequent pregnancy. This supposed check, known, and it is feared too often indulged, by all classes, she continues, until her system begins to give way, she becomes anemic, her constitution is permanently injured, and finally, from a desire not to beget too many children, "she unconsciously ruins the health of those she has already begotten," and falls herself a victim to some slumbering predisposition awaked by the long continued an exhausting drain.

Giving attention now, to another phase of the subject—"the effects of unsuitable marriages" upon public health, prosperity and growth—"it may be stated in the outset that too early or too late marriages are punished by sterility or by the procreation of offspring afflicted with a lowered vitality." The deduction of M. Quatelet on this subject, derived from a large number of statistics, are as follows:

1. Too early marriages result in sterility or in birth of children whose chances of surviving to the average period of life is lessened.

2. Marriages which are not infertile are productive of the same number of children, independently of age, provided that the average age of the husband does not exceed 33 years, nor that of the wife, 26. After these ages the number of children diminishes.

3. The greatest fecundity attends the marriages of men under 33 years of age to women under 26.

4. Other things being equal, those marriages are most fertile in which the age of the husband at least equals that of the wife or does not greatly exceed it. (Wilson loc. cit.)

To these deductions may be added those of Dr. Mathews Duncan and many others, which go to prove, that apart from fecundity, the health of the mother, and consequently of the offspring, has a less chance of being deteriorated by delaying the woman's age of marriage to 25 or 26 years. (Wilson loc. cit.)

Some of the most direful consequences associated with ill-timed marriages, such as cultivating human venenations, have been alluded to under "Hereditary Influences;" others equally baneful remain to be told. Continued breeding in and among animals leads slowly, but surely, to vitiation and complete extermination; independent of constitutional dyscrasias: the same law holds good with mankind. Thus it is that ancient and illustrious families have become extinct. As illustrating this subject, the subjoined facts are introduced:

"Amongst the children proceeding from 121 marriages of this description, M. Devay found that 22 were sterile, 27 deformed and two were deaf mutes. Out of 34 marriages "of the same kind," investigated by Dr. Bemiss, of Louisville, 7 were found infertile. From the 24 fertile marriages, 192 children were born; of these, 58 perished in infancy, 46 appeared to be healthy, 32 deteriorated, 23 were scrofulous, 4 epileptic, 2 insane, 2 dumb, 2 blind, 4 imbecile, 2 deformed, 5 were albinos, 6 had defective vision, and one had chorea. The remainder were not reported on as regards physical condition. Dr. Howe's statistics * * are still more decided: Out of 17 marriages between blood relations, resulting in the birth of 95 children, he found that 44 were idiots, 12 scrofulous, 1 deaf, 1 a dwarf, and only 37 who enjoyed tolerable health. M. Boudin, again, has calculated that whilst consanguine marriages in France only amounts to two per cent. of the whole number, the deaf and dumb children resulting from these marriages amount to nearly a quarter of the whole."—(Wilson.)

Facts narrating the same melancholly tale as those adduced might be gathered *ad libitum*; but enough, it is thought, at least to convey an idea of the potency of ill-timed marriages in debasing the standard of health, have been presented. Whether legislative enactment, looking to the abolition of this source of health pollu-

tion, under the existing state of imperfect education, would accomplish much in this direction is a question admitting of doubt.

The subject of syphilis, with its long list of succeeding miseries, need only to be mentioned to awaken in the mind of every medical man, the horrors of the direst infliction that immorality can entail upon the human race. Of this terrible scourge Dr. Sims writes: So far as the well being of the human race is concerned, I look upon the subject of syphilis as the great question of the day. It was formerly a question of treatment, of mercury or no mercury. But that time has passed, and now it is a question of prevention, of eradication, of protection of the well against contamination of the sick. In other words, it is no longer a question for the therapeutist, but one for the sanitarian, the philanthropist, the statesman, the legislator. It is one of public hygiene and public health, and as such, we are bound to meet it. The time has come when we can no longer shut our eyes to its evil influences, and we must deal with it precisely as we deal with other great evils that affect the general health. Mr. Simon declares he "cannot too strongly express" his conviction of the gravity of syphilis at the present time." He thinks it one of the most fatal and preventable diseases in this country.

Prescott Hewett knows of none more terrible, and thinks it the duty of legislators to enact laws for its abolition. Sir James Parget writes: It would be difficult to overstate the amount of damage that syphilis does to the population. A number of children are born subject to the disease which renders them quite unfit for the work of life. We know that certain diseases of the lungs, the liver, and spleen, are all of syphilitic origin, and that the mortality from syphilis in its later forms is every year found to larger and larger."

DEFECTIVE SANITATION.—The causes of disease embraced under this heading, are those generally sought to be contravened by legislative enactments and police regulations; but in their operation, they are so often combined with others already mentioned, in the absence of a general knowledge of their evil bearing among the people, it is almost, if not quite impossible, to deal with them successfully in this wise.

Defective Sanitation and Specific Germs are also believed to be intimately associated in inducing disease, and especially so with regard to the "Acute infectious" varieties. In point of fact, conditions constituting the former, are thought by men of high authority in the profession, to act as fomites and auxiliaries to the latter; while on the other hand, men of equal prominence contend that impure air and water, unwholesome and insufficient food, noxious emenations from marshes, drains, cesspools, animal and vegetable decomposition, can and often do generate *de novo*, these specific germs or contagia.

Impure Air.—In rural districts—aside from miasmatic and epidemic influences—aerial contamination is rarely sufficient to be recokoned a source of ill health. But in large cities, thickly peopled districts, ships, mines, overcrowded tenements, etc., it is often so charged with noxious material as to render it incompatible with life. The "Black hole of Calcutta" and Irish Steamship Londonderry may be cited as fit illustrations of this fact. Apart from this however, phthisis is known to be accompanied by greater fatality when its subjects inspire vitiated air; bronchitis, pneumonitis, scrofula and other adynamic affections are found to prevail extensively where there are impure atmospherical surroundings. "All the so-called zymotic diseases * * * are more fatal, and spread with greatest virulence, in densely populated and badly ventilated districts, and it is in

these "fever nests" that epidemic diseases, which prevail during certain septic conditions of the atmosphere, are attended with highest mortality and the greatest sick rate"

Impure Water.—The chief sources of water pollution are, defective sewerage, graveyards, cesspools, drains, slaughter houses, privies, and manure heaps, and other filth accumulations in and around farm yards. These, from a sanitary standpoint, are, of all others, the most important class of water impurities Whether it has percolated through the soil from cesspools or other filth accumulations, or whether it has been discharged directly into wells, springs and cisterns, the presence of putrescent animal matter "converts drinking water into a dangerous poison, fraught with disease and death. It is true that to a certain extent, the process of filtration through porous soils tends to render less hurtful the sewerage that dribbles into the water supply, but this process cannot be trusted, however complete it may appear, for after a time this purifying is lost, the soil becomes sodden" and the noxious material enters the water unchanged. There is, therefore, always danger lurking in water liable to contamination from animal matter, and more especially when such matter contains evacuations from patients suffering from certain specific diseases, such as cholera or enteric fever. Nor does the quantity of matter the water may contain, appear to influence its infectious properties, but on the contrary, so long as it is of this *quality*, the most infinitesimal amount may so poison a well or cistern that an entire community is infected thereby, and that too, without rendering the water in ihe least unpalatable.

"The principle diseases which have been proved to be produced" and communicated "by this class of impurities, are, cholera, dysentery, enteric fever and diarrhœa."

Unwholesome and insufficient food, when in themselves not the direct cause of diseased action, induce a condition of the system highly favorable to the action of "germs" and other causes of disease. Relapsing fever, or "hunger pest," as it is sometimes called, illustrates this fact. Unwholesome and insufficient food begets gangrene, scurvy, typhoid fever, scarlet fever, enteric troubles, mania, tape worm, trichina, debility, and various other unhealthy phenomena.

The effluvia from drains, cesspools and animal matter undergoing decomposition, are composed of nitrogen, sulphuretted hydrogen, light carburetted hydrogen, ammonium sulphide, germs of vibriones, bacteriæ, monads, and particles of decayed and decaying tissues, such as epithelium and pus cells. Many examples of temporary ailments due to their inhalation are recorded, but to the sanitarian, the greatest interest which attaches to this subject rests on the communication and spread of the various infectious diseases. This latter question seems to be settled beyond all doubt, but here, as with polluted drinking water, it must not be forgotten that, although not appreciable to any of the senses, the air of any given locality may, from these causes, contain the elements of disease and death in greater or less abundance. It should also be remembered that these dangers are by no means necessarily confined to the immediate neighborhood from whence the effluvia proceed, but existing as a focus of infection—the wind continuously blowing over it—the disease germs may be transported many miles in every direction; hence the health of other communities are also greatly endangered.

The exhalations from marshes and vegetable putridity play an important part in the causation of the various miasmatic, gastro-intestinal and enfeebled and exsanguined conditions of

those living in malarial districts. They are said to contain carbonic acid in excess, light carburetted hydrogen, watery vapors, sulphuretted hydrogen, debris of vegetable matter, infusoria and insects.

From ancient times down to the present, the materies morbi of malaria, and its modus operandi, have been the subjects of much investigation and speculation, nor do these points seem to be yet definitely settled, but there seems to be a growing conviction that "Ague germs are minute particles of bioplasm, derived from, and identical in nature with, the minute particles of vegetable protoplasm which determine putrefaction." (Sansom.) That this bioplasm enters the system by inhalation and drinking water, and "Acts first most strongly on the nerves that regulate circulation, causing for a time contraction of the arterial vessels and consequent sub-oxidation everywhere. But this soon passes into a state of peroxidation, partly from obstruction of the small arteries increasing the pressure of the heart, and partly from the changes going on in the textures and in the poison by which it is partly destroyed. During the remission *the poison is reproduced until sufficient, in from one to three days, is formed to go through the same action again.*" (Dr. Bence Jones.)

Heat, not less than 60° Fahr., with moisture and vegetable decomposition, seems necessary for the production of malarial "germs." A temperature of 32° Fahr. prevents their evolution. They are transported by the air to a considerable distance, probably as far as five miles, but do not attain a very high altitude. In passing over large bodies of water, they are absorbed, or adhere to its surface, so that the atmosphere is freed from more or less of them. Physical obstructions, such as trees, hills, houses, etc., also collect more or less of these "germs."

The almost total disappearance of malarial fevers from those swampy, marshy portions of England where, before, they were very prevalent and fatal, since inauguration of the system of effectual drainage there, is regarded by sanitarians as good evidence that these causes of fevers are very largely controlled by such measures. It may not be improper to say, also, in this connection, that the mortality of phthisis, rheumatism, cardiac diseases, and catarrhal complaints, have been very much lessened in the same region of country by the same measures. This subject merits great attention from those living in swampy, marshy, malarious country, and if, as is claimed for it, the eucalyptus possesses the power of drying up swamps, etc., and, at the same time, emitting a substance that is antidotal for the malarial "germs," there seems to be no reason why those who live in localities—in which this tree can be cultivated—subject to these influences, should not enjoy complete immunity from miasmatic diseases. (For a compilation of interesting facts bearing on this important subject, *vide* author's article "The Eucalyptus Globulus," etc., Eighth Annual Report Texas State Medical Association.)

Specific Germs.—The theory that infectious diseases are each due to the action of its own specific germ upon the human organism, is rapidly gaining favor with ætiologists; but there is considerable difference of opinion as to the nature of these poisons. On this point there appears to be three well marked theories.

According to the first, the poisons are organic substances, which produce their effects by their physical properties alone.

According to the second, the poison is not merely organic, but organized, and is derived from the living matter of a previously existing organism.

According to the third, the poisons are living germs, entirely derived from fungoid organisms. (Sansom.)

Without attempting to adduce the arguments that have been put forth to substantiate either one of these theories, the following conclusions arrived at by Dr. Sansom, after elaborate experiments, and due consideration of those made by other investigators, may be stated, if my understanding of the subsubject be not at fault, as the opinions most generally indulged by leading ætiologists of the present day. A disease germ is a living, solid, insoluble, indiffusible colloidal particle, the smallest quantity of which, when supplied with its proper pabulum, will grow and multiply, giving rise to millions of little particles like itself, each particle capable of being transmitted through certain media to human organisms, and there inducing the violent perturbation of its specific disease, and so on *ad infinitum.*

That the potential energy of a disease "germ" is due, and can alone be due, to a particle possessing life—such a particle, "possessing" not the reactions of a chemical compound, but the complex reactions of a living being. It does not possess the chemical characters of a definite organic compound, but the complex albuminoid constitution of the material which pertains to living beings. It is rendered inert by agents which would be inoperative on a chemical substance by heat and by cold; and the chemical agents which influence it exert their power, not in virtue of their chemical properties, but in so far as they are poisons to animal or vegetable organisms. (Sansom.)

Cholera, typhus, typhoid, yellow, and scarlet fever, measles, variola, whooping-cough, diptheria, erysipelas, pyaemia and puerperal fever are the acute infectious diseases, attended with

highest mortality, the production of which, it is thought, involves the action of "specific germs." But in conjunction with the "germ theory" of infectious diseases, it is important not to ignore other agencies that stand in the relation of co-operative causes, for the efficiency of many of these disease germs appear to be more or less dependent upon the presence of anti-hygienic conditions. The cholera epidemics in New York in 1866 and 1867 clearly illustrate this fact, for there the disease was, almost without exception, confined to insalubrious localities, and with the exceptions it would seem that the individuals contracted the disease before going to the healthy sections of the city.

Prevention of Disease.—In approaching this very important subject, greater obstacles, perhaps, are encountered than can be found anywhere else associated with the maintenance of public health, for the reason that it requires not the untiring efforts of a few, but those of the entire people, in one grand harmonious whole—a thing confessedly of difficult attainment. If it be conceded that concert of action among the people is requisite to the establishment of an effective and well administered system of preventive medicine, the question of how to obtain this co-operation becomes one of prime importance. But without attempting to indicate a solution of this problem, it may be said that prophylactic medicine will fail much in its humane mission if not supported by *universal education* and instruction in public and private schools, embracing the fundamental principles of physiology and hygiene; *dissemination of knowledge concerning the laws of health, and a just appreciation of the necessity of their due observance.* Physicians, educated and competent, in active practice and scientific investigation, to propound the best methods for avoidance of dis-

ease, and aid in their practical details; legislators to enact such laws as the experience of the past, conjoined with the requirements of the present, would seem to indicate for protection of the public health; ministers to proclaim from their lofty station "that sanitary improvements in man's surroundings will not compensate for social transgressions against the laws of morality," and thus teach the *physical* as well as *spiritual* effects of sin; lawyers and judiciary to *rigidly enforce* the penalties for violations of health-preserving regulations; national board of health as a department of the general government, assisted by similar state and county institutions, with their health police, to whom should be referred all matters concerning the prevention of disease and preservation of health, as well as—in conjunction with the present emissaries of the law—enforcement of health regulations, and lastly, but by no means least, the hearty co-operation of a public who have been *taught* that the general well being of the people must mainly depend on their own exertions and self restraint.

To the humanitarian it is the source of no little gratification to know that the science of preventive medicine, and laws for its enforcement in obedience to the universal law of progress, is *gradually advancing*, both in this and foreign countries. Already, in addition to the health regulations of the principal cities in this country, the states of Virginia, Louisiana, Massachusetts, California, Minnesota, Michigan, Maryland, Georgia, Alabama and Wisconsin, have their state boards of health and sanitary laws. But the science will not be permitted to rest here. Political economists, recognizing the fact that national prosperity and strength depend on the health and physical condition of the people, will unite with sanitarians in establishing a national board of health commensurate with American enlightenment,

and such as shall entitle her to the foremost rank among the great powers in protecting her subjects from the ravages of disease. In this, however, it must ever be borne in mind that enactment of laws, with penalties prescribed for their infringement, looking to the protection of the public health, has no more effect in abolishing the causes of disease than enactment of penal laws has in suppression of crime. The people *cannot* "be dragooned into cleanliness, or be made virtuous by police regulations, and hence it is that the most thoughtful among practical reformers of the present day base their hopes of sanitary progress on the education of the masses as the real groundwork of national health. The people must be taught that good conduct, personal cleanliness and the avoidance of all excesses and immoralities," are the first principles of health preservation; that mental and physical training must go hand in hand in the rearing and guidance of youth, and that morality does not consist so much in a blind observance of the formulæ of empty creeds as in a hearty submission to precepts of health. This is by no means all. They must become deeply interested in the inestimable blessings of sanitary progress, and familiar with causes, social and material, by which its grand accomplishments are impeded. Without a wide dissemination of a fundamental knowledge of the laws of health among them, it were useless to expect legislative enactments, however well devised, to accomplish much toward elevating and preserving public health. For it may be asked, how could it be expected of them to yield obedience thereto, when, with respect to the ascertained laws of health and agencies that militate against it, they are shrouded in the midst of ignorance?

From the watch-tower of sanitary science, the difficulties considered, to one scanning the horizon, the outlook is one radiant with hope. The gradual inauguration of the free school system-

throughout the country; the introduction of physiology and hygiene in the courses of some of the private schools, while the public press, ever to the front in matters of general interest, gives prominence to discussions concerning the preservation of health, in conjunction with attention given the subject by hosts of good, true and noble men, in and out of the profession, may be taken as indices of the growing and intelligent interest taken in matters looking to the general weal. And upon this foundation it seems but fair to conclude that, at no distant period in the future, there will be established an effective and well administered system of preventive medicine.

REPORT OF COMMITTEE ON CLIMATOLOGY.

By EUGENE PALMER, M. D., CHAIRMAN.

Climatology, according to Webster, is "the treating of some of the causes which *modify or govern climate.*" To recount some of the natural causes which *modify or govern climate*, derived from the action of a tropical sun upon the ocean of air and water, and how his heat, masked and rendered latent in the evaporation of tropical waters, is wafted by the winds to countries where it is needed, and there, by the condensation of this vapor, the latent heat is set free to soften the rigor of northern regions; or how the thermal waters, rendered lighter by the vertical action of the sun's rays, forms a surface current, which, being lifted up and displaced by colder and heavier currents, is caused to take a counter flow northward, until it pours its heated waters into the Arctic ocean; and how, in its course, it tempers the climates of those countries near which it passes, so that up to the North Cape the winters are rendered so mild that one may travel eight or nine degrees of latitude, on the western sea board of Europe, without once changing climates; and how the same phenomenon is presented on the western coast of North America, and the same modification of climate by the tepid waters of the Pacific currents, flowing northward, causing the western slopes of Oregon to have, during the entire winter, open harbors extending up to the borders of Alaska and other parts of the northwest coast; and how that the condensation of vapor

sufficient to form one cubic foot of ice is said to liberate caloric to the amount of a hundred thousand cubic feet of air at summer heat; and how nature makes such use of these properties that she holds in suspension the heat of the torrid zone in the minute vesicles of vapor, so much lighter than air, which, like the warm ocean currents, being displaced by colder and heavier strata of air, are caused to move northward, and are wafted by the winds to colder regions, where they are condensed into rains to irrigate the soil and their latent heat set free to warm the air; and how, in proportion to the sun's northern declination, the days are lengthened, and the heat increased until he reaches the summer solstice on the twenty-first of June, when the heat on that day is greater in Canada than in Louisiana, and probably equal at the north pole with that at the equator. "In latitude 80° 19′ N., Sir John Richardson was obliged to take to the water in order to avoid the direct rays of the sun," and Captain Scrosby found, in the same latitude, that the pitch in the seams of his vessel melted on the sunny side (which never happened on the coast of Africa, where the thermometer had stood 130° Fahr.), while, on the shady side of the vessel, ice was at the same time rapidly forming; and how, by the operation of this beautiful machinery, the summer belt, or area of cultivation, is extended northward; and how the earth thus yields her increase to man, in obedience to the laws of climate; and by applying these facts, which *modify or govern a climate*, to the economy of nature, would seem, strictly, to extend beyond the bearing of our profession. That part of climatology, then, more fitting our present purpose is to treat of some of the artificial causes which may be made to *modify or govern a climate*, so far as it effects our race; of how man, by his intelligence and energy, is enabled to modify some of the laws which govern climate,

or to remove such conditions, at least, as are imposed upon it by his neglect or indolence. In the fifth satire of the first book of Horace the argument of that poem contains something very instructive in the police of health. It is made up of a record of the incidents of a journey from Rome to Brundusium, which Horace performed, in company with four of his friends: the poet Virgil, Macænas, Varius and Plotius, who were sent by the Roman senate as peace commissioners, to adjust a difference between Octavius Cæsar and Mark Anthony, (for it would seem that commissions and returning boards were as much the fashion in the decline of the old republic as it has lately become in the decline of the new). This embassy resulted in the well known treaty—called the treaty of Brundusium—which effected a temporary reconciliation and averted, for a while, the terrors of a civil war. Although engaged in business of government, and "travelling on affairs of state," their journey resembled more a frolic or party on an excursion of pleasure than the dispatch and hurry of plenipotentiaries. They performed it leisurely, by short stages, stopped at their own villas, which lay in their route, where they entertained each other in turn; and took their time to gather up every incident worthy of record, and for the enjoyment of whatever the poet found—in the portrait of person and character—ludicrous or amusing, on their way. Their journey was through the Appian way, which extended from the *porta capena*, in Rome, to Brundusium, a distance which commentators have put at three hundred and twelve miles. The location of Brundusium, on the Adriatic, is the Brividisi of the present day. It was once a famous city—the capital of the Salentines—a safe harbor with an island opposite its entrance, which served as a break-water against the fury of the waves. There the fleet of Mark Anthony rode at anchor in sullen defi-

ance and ready for the impending conflict, which this embassy had happily averted. This satire represents that this embassy passed over a greater portion of the present *campagni di Roma*, then healthy and teeming with a dense population, which is, at this day, one of the most sickly and avoided localities on the face of the globe, and this tract of country, over which Horace and his companions, with all their retinue, traveled with perfect safety, and with every confidence in the salubrity of the climate, without the slightest suspicion that any danger was incurred, or that any precautions against falling sick was required, as they carelessly and leisurely passed through it—exposed equally by night as by day—sleeping, necessarily, in villages and taverns and such stopping places, for a number of nights, in the very midst of the now sickly, paludal districts, which, at the present day, cannot be visited at the same season of the year, and stayed in for the same period of time, and under the same circumstances, breathe the vitiated air of those localities without the utmost risk to life. The question here suggested for our consideration is: by what means did the Romans so "*so modify or govern a climate*" in a locality by the nature of things so sickly, as to have rendered it capable of supporting a dense and healthy population, (said to have possessed numerous small cities to a great extent independent of each other), the inhabitants of which tended their flocks and tilled their lands in the surrounding neighborhood, and where, at a later date, were located the villas of the wealthy patricians, with their ornamented parks and gardens, and noted as healthy retreats from the confined habits and air of city life? Also, by what means the very Pontine marshes were made the homes of a thrifty, active, numerous and healthy population? "At that time it contained thirty-three towns; now nothing meets the eye of the traveler but a solitary post-

house here and there, tenanted by wretched beings rapidly sinking under the effects of various influences." (Barton.) It would seem that the Romans, 2000 years ago, were farther advanced in the science, and better acquainted with the value of sanitary laws than the most enlightened nations of the nineteenth century, and Rome may be cited as affording, in itself, a history of most that is valuable in the police of health. In spite of her sickly location, she overflowed with population, and the unhealthiness of her position was corrected by the complete drainage of her marshes, and her abundant supply of pure water from her numerous aqueducts, her public baths, and the enforcement of sanitary laws. The protection afforded by forest growths acting as a screen to impede the wafting of noxious exhalations, was well known to the ancients, and the woods in the vicinity of Rome were consecrated to Neptune and thereby preserved from the woodman's axe. A convent near St. Stephano, encircled by trees, once famed for the perfect salubrity of its air, became exceedingly unhealthy after the trees were cut away. At Vilitri, near the Pontine marshes, (according so Laucisci,) the clearing of an intermediate wood occasioned at once the most unmanageable diseases, unabated in their malignity for three full years. And certain it is that the former healthy condition of the Pontine marshes and the surrounding country was owing to its large population, adequate drainage, constant tillage, the cultivation of crops, planting of trees, and thereby supplying oxygen to the air by vegetable respiration. In imitation of what we may suppose to have been done by the Romans, has been done to some extent, in modern times, by the British nation. In their colony at Demarara, within six degrees of the equator, a portion of one of the most extensive morasses in the world has been made quite healthy by cultivation. Another example of the effect produced

by sanitary laws is found in the history of Calcutta. That city, built on a morass on the banks of the river Hoogley, formerly almost a certain grave to Europeans, has by a system of drainage, a sanitary police within, and a thorough cultivation of the country around it, been made quite healthy to both natives and strangers. The salubrity of Rome as it was, and the unhealthiness of Rome as it is, furnish in their contrast the value of sanitary science, and how a country will retrograde when the laws of health are neglected; and that a healthy atmosphere in a country, like liberty in a government, can be preserved only by constant vigilance. These examples are sufficient to show that some of the causes or conditions which *"which modify or govern a climate,"* can be so controlled by the intelligence of man, that disease and mortality are made to recede before the efforts of his industry, and that human life may be prolonged by his enterprise. The constant application of sanitary laws has made England one of the healthiest countries in the world, so that "the average age at death in England is twenty-nine years, while in America (the United States) it is but twenty." (Barton.)

Since the dew point has been determined with exactitude by the hygrometer, the fact has been established that fevers of a very high grade do not occur without a high dew point, accompanied with great heat. The evidence of Professor Blodget—through the net-work of scientific climatology, spread over our country by the Smithsonian Institute—goes to show that great heat, with a low dew point, leaves a country healthy. But when the atmosphere is saturated with moisture, and accompanied with great heat, the most destructive fevers occur. It is not the precipitation of wet air, or of moisture immediately after copious rains, that constitutes what is meant by a high dew point—as one of the causes of disease—but evaporation of a dry season

after a wet one; not merely water gas, but some supposed volatile ingredient added to it. Theodore de Sausseur, in a paper read before the Physical Society of Geneva, says: "The variations which I have observed in the atmospheric carbonic acid —in the open country—are due to two causes: first, to the changes which the soil undergoes in its moisture, which moisture absorbs this gas, while its dryness evolves it." This explains why marshes or swamps, when covered with water, do not produce disease, but while undergoing the drying process they evolve the most noxious exhalations, Add to to this dew point the exhalations from urban cemeteries; from exposed earth from deep diggings; from the decay of organic matter, or the neglected filth from camps and cities, and we have all that is meant by a *terrine cause.* And let the meteorologic or epidemic constitution of the air be ever so concentrated, it cannot of itself—according tot he experience of modern observers—produce an epidemic independent of the terrine cause. One of the most remarkable examples in proof that a meteorological condition or epidemic influence of the atmosphere requires the local or terrine cause to produce disease, or kindle up an epidemic, was furnished by the epidemic cholera of 1832. Granting that the meteorological or epidemic condition ot the air (call it cholera poison) was everywhere the same, in the air over the country as well as over the city. Throughout all the New England States, with the exception of a few provoked and scattering cases in some of their large cities, no case of Asiatic cholera occurred, for the terrine cause was wanting; and "The cause why the cholera in England seized on some towns and passed over and spared the next, was owing, according to the most satisfactory experience, to the difference in the localizing or terrine conditions." (Barton). Owing to the same facts,

the cholera in the south spared many surrounding plantations, and, at the same time, almost depopulated those where it was fed by the terrine cause. The ingredients, or elements, of this terrine cause accumulate amongst us. This cause, then, so absolutely essential to the out-break of an epidemic, being indigenous, and not exotic or imported, shows, beyond a doubt, the inutility of a *quarantine* to prevent the occurrence of epidemics and the value of sanitary police. These two causes of epidemics—the terrine and aerial—have been figuratively denominated "the two blades in the shears of fate." Dr. Hunt, of Buffalo, in a paper read at the Eighth Annual Session of the American Medical Association, says: that "Aerial causes alone are not sufficient for the actual production of true zymotic disease, but that when combined with the terrine cause, they exert a direct, marked and fatal influence upon epidemics, and that these causes are separable, the terrine conditions being removable by the judicious exercise of a sanitary police. It is enough that we can control and prevent the ravages of epidemics through these secondary, or terrine, causes, whose existence is known, and whose influence is governable." Thus climite, so far as it effects our race, is composed of ingredients, many of which can be so far controlled or removed by the intelligence of man—in the application of sanitary laws—as to enable him, to a great extent, to *modify or govern a climate.*

REPORT OF COMMITTEE ON INDIGENOUS MEDICAL RESOURCES OF TEXAS.

By SAM. R. BURROUGHS, M. D., CHAIRMAN.

In attempting the discharge of the duties of the position to which I have been assigned, I have very deeply experienced its grave responsibilities and importance; nor have I failed to realize, with much regret, the many difficulties which naturally beset the inquirer whose steps and labor must be amongst the minerals and flowers of our great commonwealth. These obstacles become magnified to an astounding degree as the fitness and ability of the laborer recede from the work to be accomplished, and, in view of this fact, I do not hesitate in the enunciation that your humble writer feels his great incompetency to award the subject of his appointment that justice its importance so richly demands.

The first difficulty, therefore encountered, was in the fact that I am not a practical botanist, and had I been, it would have required a botanical survey of the State to have obtained material for the basis of a report that would even approach the fulfillment of its design.

A second was experienced in the absence of any accessible literature bearing either on the inorganic or organic products of our State, as well as specimens of the various plants of the different counties, a want of time to place in execution meas-

ures through the operation of which might be obtained, in part, a list of the medicinal plants indigenous to each county. I have also been no little embarrassed by the failure on the part of those to whom I addressed the circular letter containing the following five questions, to-wit:

1. What are the inorganic resources of your county, and what the relative abundance of each element or compound?

2. Are there any gold, silver, copper, iron or other, mines in your county? If so, to what extent are they worked, and what the comparative value of their products?

3. Are there any mineral springs, lakes or wells, situate in your county? If so, what are the constituents and medicinal virtues of their water?

4. What are the organic resources of your county, and what the relative abundance of each plant?

5. Are there any plants in your county whose medicinal virtues and abundance would offer inducements to the pharmaceutical chemist? If so, state their botanical as well as common name, in connection with their therepeutic virtues.

Out of five hundred of these circulars, two or three of which were sent to physicians residing in each county in the State, I received a response from only six.

Inorganic Resources.—Dr. A. R. Kilpatrick, of Navasota, Grimes county, writes:

1. The inorganic resources of Grimes county are limited to soft sandstone, limestone, petrifactions of wood, pebbles and agate, chalk, mica and anthricite coal. Gray sandstone and limestone are abundant, and before and during the war the latter was utilized in the manufacture of a good quality of lime.

Chalk, very pure and fine, exists in large bodies eight miles N. N. E. of Anderson. Chalk has been found elsewhere in

thin strata four feet under ground. Mica is plentiful in Fuqua's prairie.

Anthricite coal exists in thin strata a few feet below the surface, at and around Piedmont springs, and no doubt it exists there and in other places in large quantities.

There have been found only some specimens of iron pyrites in different places, when sinking wells, at a depth of seventy or eighty feet. No gold, silver, copper, etc.

3. All the well water in Grimes county is charged more or less with some mineral. Alum, iron, soda, lime, and their salts, are detected in varying proportions in several wells in various parts of the county.

Sulphur Springs exist very generally in the northern and north-eastern portions of the county, and the water is very cool and pleasant. Persons can drink large quantities without feeling oppressed. They are resorted to by residents and strangers laboring under various forms of disease, and their curative powers are certified to by thousands who have been benefitted or cured by them.

Sour Springs, containing alum in varying proportions, are found in different parts of the county. Very sour water is obtained from a well near Gibbons' creek. No analysis has been made.

Sulphate of soda water is afforded by a well on Mr. Zimmerman's farm. It tastes like the Luling water, and is a prompt laxative.

Petroleum is supposed to exist in the N. N. E. part of the county, as wells emit the odor in a very decided manner.

Kellum Sulphur Springs, ten miles east of Anderson, have been in high repute nearly forty years for their pleasant taste and decided medical virtues. The water has a taste similar to

that of Congress Spring, at Saratoga, N. Y., and the White Sulphur Springs of Virginia. No analysis has been made. They are highly beneficial in case of dyspepsia, general debility, rheumatism, neuralgia, and cutaneous diseases. The supply of water is ample.

Piedmont Sulphur Springs, ten miles N. N. E. of Navasota, have become celebrated all over Texas for their rare medical properties.

An analysis of the water was made several years ago by a reliable chemist of Philadelphia, but I cannot procure a copy of it. Mr. L. Cannon, Sr., of Galveston, reports from memory that to each gallon of water were one hundred and twelve grains of solid matter, and that the principal ingredients were sulphur, soda, lime and iron, strongly impregnated with hydrogen and carbonic acid gas. There are three distinct springs within a space of a few yards; one quite clear, yet charged with sulphur; another of a yellow tinge, and the third is dark colored, owing to its ferruginous ingredients, mingled with sulphur and other substances.

They are laxative or cathartic in proportion to the amount drank; actively diuretic, depurative and alterative. Sometimes, if taken for too great a length of time, they cause chills. There is scarcely any disease but what has been cured by these waters, except phthisis pulmonalis, dropsy, rheumatism, cutaneous diseases, syphilis in all its stages, mercurial sores, ulcers, scrofula and dyspepsia of all grades."

Dr. J. Cummings, of Austin, responds in the following language:

1. I may mention that coal strata exist going north-west and south-west cropping out about nine miles south-west of Austin. Sulphate of magnesia exists in great quantities about

three miles from Austin, on the surface of hills, (among the latter may be mentioned Mt. Bonnel), in an anhydrous state. Clay for the potters' use may be found in great abundance. Lime-rock on all the ridges of the Colorado river, garnet and opal exist here and there in the alluvium, some of fine colors and tints. Silicates exist in abundance.

2. No mines in Travis county. Iron ore exists, but of an inferior quality.

3. In the bed of Colorado river, about fifteen miles above Austin, there are sulphur springs. I have not analyzed their waters, but am confident sulphur predominates in the form of alkaline salts held in solution. Previous to the late war, families from this place occasionally spent a part or the whole of the summer season at these springs, and derived benefit from the use of their waters. They are surrounded on either side of the river by mountains, making access difficult, which I have no doubt has prevented their use more extensively. Most Texans are aware that in boring an artesian well in capitol square a stream of mineral water resulted which has been used for medicinal purposes. At one time it was common for the citizens to go morning and evening and drink of the waters. I believe sulphate of magnesia was one of its principle ingredients. This well has since been obstructed in an effort to prosecute the work further.

About nine miles north of Austin there is a spring which occasionally emits a small stream of coal tar. It has been thought that petroleum might be found in this region.

Dr. A. P. Brown, of Jefferson, Marion county, writes:

1. Iron and coal—iron very abundant; coal scarce.

2. Iron in very large quantities exists in about one-half the area of Marion county, with an occasional trace of cannel coal.

Two large foundries do an extensive manufacturing business from pig iron made from the native ore taken from the mines, and a good article of muriated tincture of iron may be made from the filings gathered from these shops.

3. There are several sulphur springs and two sulphur wells. The water from a great number of our wells contains iron. The medical virtues of the sulphur water are the relief of flatulence, dyspepsia, indigestion, and constipation. The iron possesses its well known tonic properties."

Dr. R. H. Harrison, of Columbus, Colorado county, writes:

1. We have no known inorganic medical resources in our county; (2.) nor have we any mining interests.

3. There are several so-called mineral springs in the county, only one of which seems to merit the title. This is a chalybeate spring, about three miles east of Alleyton, in which the sulphate of iron is probably the only constituent of any consequence. It is not resorted to.

Dr. R. L. Smith, of Caldwell county, says:

1. There is a range of hills known as the iron mountains, extending from the Colorado river, in a south-west direction, to a considerable distance below Caldwell's mineral springs, which is peculiarly rich in mineral ores and medicinal waters. Iron and copper are found in great abundance. Silver has also been discovered in some places, and there is little doubt that by thorough investigation the bosom of these mountains would be discovered to be rich in the precious metal. This range passes through the western portion of Bastrop and the eastern border of Caldwell and Gonzales counties. In these mountains has also been discovered iron ore in abundance, and with proper enterprise and energy could be worked to advantage. Coal of an inferior quality has been found in large

quantities, which is said to burn well, but is a poor generator of heat.

2. The silver mines some fifteen or twenty miles south-east of Caldwell's springs have been worked some, and with the facilities at hand have yielded a good dividend. The other metals, iron, copper, coal, etc., have not been sought after.

3. On the Cibolo creek are found springs of different qualities and elements; black and white sulphur are there in close proximity; chalybeate and sour water are also there, as well as the seidlitz and soda. These springs have been for many years a resort for invalids. Their sanative properties are said to be good, and many cures of different kinds have been made. There are two watering places in this county near each other: Cardwell's springs and Burdell's well, both of which have acquired considerable reputation for their curative properties, and a large number of persons from all portions of Texas and some from other States, have visited them this summer. The basis of the water at both places is iron, in one of which the sulphate is prominent, and in the other the carbonate. While no thorough qualitative or quantitative analysis has been made, the water is found to contain, besides iron, alum, magnesium, potassium, sodium, baryta, iodide of iron, strontia, silica and free sulphuric acid, and, from personal observation, I will state that the water is especially adapted to most chronic cases, attended with great debility, such as piles, rheumatism, disordered liver, dropsy, paralysis, old sores, diseases of the skin, and vaginal and uterine diseases, attended with mucus discharges or ulceration. There are two very remarkable features which characterize the action of the water, namely: It operates vigorously on the liver without pain or depletion, greatly increasing the appetite, without inconvenience or op-

pression of the stomach. Secondly, it effectually destroys all desire for alcoholic stimulants, or in other words, a person cannot drink both at the same time without being made deathly sick.

Dr. D. A. Cook, of Tehuacana, Limestone county, says:

There are two mineral springs eight miles south of this place; do not believe their waters have ever been analyzed, though from taste and odor I am satisfied that sulphur and iron enter largely into their composition. They also seem to be impregnated with sulphuretted hydrogen gas. Their medicinal virtues seem to be that of a depurant, acting on the chylopoetic circulation.

ORGANIC RESOURCES.—The organic resources of our State are equal, if not superior, to those of any sister State. I offer below a list, consisting in part, of both the sylva and flora indigenous to our soil. It has been compiled from the various reports received from the following gentlemen, to-wit: Drs. A. R. Kilpatrick, R. L. Smith, J. Cummmings, and my own personal researches:

Acarus Calamus, (sweet flag). Refer to U. S. D. Scarce.
Aralia Spinosa, (Angelica tree). Used as a domestic remedy for gonorrhea and syphilis.
Asclepias Tuberosa, (butter-fly weed), U. S. D. Abundant.
Aristilochia Reticulata, (Virginia snake-root), Abundant.
Achillea Millefolium, (yarrow). Scarce.
Alteris Ferinosa, (blazing star). Scarce.
Algarobia Glandulosa, (mesquite gum), Abundant—mucilaginous.
Agave Virginica, (rattle-snake weed), Scarce.
Agaric, (spunk), Abundant.
Alisma Plantaga, (water plantain), Scarce. said to be.
Ambrosia Trifida, (rag weed). Abundant—dysentery and bowel affections.
Andromedia Mariana, (toe-itch tree), Scarce—fissures and abrasions.
Agrostis tellata, (wild leek), Scarce.
Agrimonia Upatoria, (common agrimony), Said to exist in small quantity.
Anthemis Catula, (may-weed), Abundant—tonic.
Arum Triphillium, (Indian turnip), Exists in eastern counties.
Aralia Medicaulis, (wild sarsaparilla), Tonic alterative—scarce.
Betula Lenta, (American birch), Tonic and astringent—scarce.
Baptisia Tinctoria, (wild indigo), Abundant—anti-spasmodic.
Bideus Bipinata, (Spanish needle), Abundant—said to be tonic and alterative.
Baptisia Alba, (prairie indigo), Abundant—used as anti spasmopic.
Celtis Occidentalis, (hackberry), Abundant—said to be tonic and astringent.
Cornus Florida, (upland dogwood), Abundant
Cornus Cerasea, (swamp dogwood), Abundant.
Cephalanthus Occidentalis, (button willow), Abundant—tonic.
Carya Alta, (white hickory), Abundant in the eastern counties.
Carya Sulcata, (scaly bark), Abundant in the eastern counties.
Carya Olivæ Formis, (pecan), Abundant in some portions of the state.
Carya Arnara, (bitter pecan), Abundant—tonic and astringent.

*Chenopodium Anthelminticum,(Jerusalem oak). Abundant.
Cunila Mariana, (dittany), Abundant—diaphoretic.
Chelone Glabra, (snake head), Scarce.
Convolvulus Panduratus, (wild potato), Said to be diuretic.
Cicuta Maculata, (American hemlock), Scarce—see U. S. D.
Ceanthus Americanus, (red root), Astringent and alterative.
Cypripedium Pubescens, (ladies slipper), Said to be alterative.
Cactus Opuntia, (prickly pear), Abundant—mucilaginous and diuretic.
Cratægus Trifolia, (thorn leaf tree), Said to exist.
Cratægus Crus Galli (thorn leaf tree), Said to exist.
Cucumis Colocynthis, (bitter apple), Said to exist in small quantity.
Capsicum Annum, (cayenne pepper), Abundant in the western counties.
Cimicifuga Racemosa, (cohosh.)

Dyosporus Virginiana, (persimmon), Abundant—tonic and astringent.
Datura Sramonium, (thorn apple), Abundant.
Dipsacus Fullonum, (common teasel), Do not know its use.

Æsculus Texanus, (dwarf buckeye), Narcotic and astringent.
Erigeron Canadense, (horse weed), Do not know its virtues.
Echinacea Augustifolio, (black sampson), Astringent, dysentery and vaginal issues.
Eupatoria Perfoliatum, (boneset), Abundant in low lands—tonic.
Euphorbia Maculatum, (milk weed), Abundant—see U. S. D.

Fraxinus Americanus, (white ash), Abundant—astringent and tonic.
Fraxinus Quadrangulata, (blue ash), Abundant—astringent and tonic.
Fagus Ferugincа, (American beech), Said to be tonic.
Fagus Castnea, (chinquapin), Abundant—astringent.

Gossypium Herbaceum, (cotton), Oxytocic.
Gelseminum Sempervirens (yellow jessamine), see U. S. D.
Glechoma Hederacea, (ground ivy), see U. S. D.

Hedeoma Pulegioides, Abundant, see U. S. D.
Hydrastis Canadensis, (puccoon root), see U. S. D.
Hamamelis Virginica, (witch hazel), see U. S. D.
Hydrangea Arborescens,(seven barks), Used in derangements of the bladder.

Hypericum Drummondii, (St. John's wart), Much used by negroes in fevers.
Hibiscus Drummondii, (Spanish apple), A good demulcent.

Ilex Opaca, (holly), Reputed good in fevers—the berries are cathartic and diuretic.
Ilex Vomitoria, (yanpon), Diaphoretic—Abundant.
Iris Versicolor, (blue flag), Abundant.

Juniperus Virginiana, (red cedar.)
Juglans Nigra, (black walnut.)

Liquidambar Styraciflua, (sweet gum.)
Licoperdon Proteus, (devil's snuff box.)
Leontodon Taraxacum, (dandelion.)
Lobelia Inflata, (Indian tobacco.)
Laurus Benzoin, (spice bush.)
Laurus Sassafras, (sassafras.)
Lauro Cerasus, (wild peach.)
Leptandria Virginica, (black root.)

Malva Rotundifolia, (mallow.)
Mitchella Repens, (partridge berry.)
Marrubium Vulgare, (horehound.)
Magnolia Grandifolia, (bay tree.)
Maruta Cotula, (dog fennel.)
Menispermum Canadense, (yellow parilla.)
Monarda Punctata, (horse mint.)
Myrica Cerifera, (bay berry.)

Nabulus Virgatus, (gall of the earth), 9 species.
Nelumbo Luteum, (water chinquapin.)
Nasturtium, (water cress.)
Nyssa Biflora, (tupulo gum.)
Nyssa Multiflora, (black gum.)

Oxalis tricta, (sheep sorrel.)

Parthenium Integrifolium, (prairie dock.)
Pinus Palustris, (long leaf pine.)
Pinus Mitis, (old field pine.)
Pinus Tæda, (short leaf pine.)
Platamis Occidentalis, (sycamore.)
Phytolacca Dacandra, (poke.)
Podophyllum Peltatum, (May apple.)
Polygala Senega, (seneka.)
Polypodium Vulgare, (tree-fern.)
Populus Angulata, (cotton-wood.)
Prunus Americana, (wild plum.)
Prunus Unbellata, (wild plum.)
Prunus Virginiana, (wild cherry.)
Polygonum Hydrpiper, (smart weed.)
Portulaca Oleracea, (purshane.)

Quercus Alba, (white oak.)
Quercus Macrocarpa, (overcup oak.)
Quercus Nigra, (black oak.)
Quercus Obtusifolia, (post oak.)
Quercus Rubra, (red oak.)

Rhus Toxicodendron, (poison oak.)
Rhus Glabra, (sumach.)

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*The *chenopodium anthelminticum* root split or cut to pieces and put into an ordinary bottle filled with vinegar, to which has been added two or three drachms of carbonate of iron will relieve anasarca when a sequel of scarlatina, or when dependent on any functional derangement.

A decoction of the plant, together with the latter cooked, mixed with meal is said to be also a good remedy for chicken cholera.

Ricini Communis, (castor oil plant.)
Rubus Canadensis, (dewberry.)
Rubus Villosus, (blackberry.)

Salix Nigra, (swamp willow.)
Sambucus Canadensis, (elder.)
Sanguinaria Canadensis. (blood root.)
Serpentaria Virginica, (snake root.)
Silphium Laciniatum, (resin weed.)
Spigelia Marilandica, (pink root.)
Spindus Marginatus, (wild china)
Stillingia Sylvatica, (queen's delight.)

Tephrosia Virginiana, (goat's rue.)
Tilia Americana, (linn tree.)
Tillandsia Usneoides, (Spanish moss.)
Typha Latifolia, (cat tail)

Ulmus Americana, (slippery elm.)
Urtica Purpurescens, (nettle.)

Vaccinium Arborerum, (Whortleberry.)
Verbascum Thapsus, (Mullein.)
Verbena Hestata, (verrain.)
Verbena Urticifolium, (nettle.)
*Viburnum Prunifoluim, (black haw.)
Viscum Album, (Mistletoe.)
Vitis Dyosporus, (p grape.)
Vitis Vulpina, (muscadine.)

Xanthium Strumarium, (bur.)
Xanthoxylon Fraxineum, (tooth-ache tree.)

Yucca Filamentosa, (bear grass.)

The therapeutic application of most of the above-mentioned indigenous growths may be found by reference to the United States Dispensatory, the greater part belonging to the secondary list.

Finally, to attempt a report, approaching completion in department and detail, of the indigenous medical resources of a State whose area embraces 275,504 square miles; whose bosom heaves with the regularity of the seasons; whose mountains are but vast elevations of undeveloped wealth; whose valleys are but slumbering mines, from which the agriculturist may draw inexhaustibly the necessities of life; whose wide-spreading and richly carpeted prairies offer irresistible inducements to the shepherd and his flock; whose genial clime, mineral springs, lakes and wells extend relief and consolation to the invalid, would be futile in the extreme, with our present knowledge of the whole.

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*A saturated tincture of the bark of the root of the *viburnum prunifolium* has been highly recommended as a remedy for the prevention of abortion. I have used it successfully in two cases of habitual abortion, administered in dessert-spoonful doses three times a day. The decoction is best where the patient is very sensitive to the influence of alcohol.

REPORT OF COMMITTEE ON SURGERY—CAUSATION OF CALCULOUS DISEASE.

By A. E. CAROTHERS, M. D., CHAIRMAN.

The pathological processes which give rise to the formation of urinary calculi have never been explained and accounted for in a way which has received the general sanction of professional opinion, scarcely two writers agreeing upon the subject, and a study of the works of half a dozen different authors, always ends by leaving the mind of the investigator in a haze of uncertainty, by reason of the conflicting and contradictory hypotheses advanced.

Great ingenuity has been manifested in all periods of medical literature in explaining conditions which would account for their existence, and many have been the investigations of the physiological, pathological, dynamic and chemical processes by which an excess of uric acid, oxalate of lime, the phosphates, etc., is formed, or may exist free in the urine; but the fact is too often lost sight of that these may all exist, and no stone be formed, while again a large stone may be and frequently is present, in the absence of all of them.

Most observers, with a singular unanimity, refer stone to a diathetic cause—some vice of the system by which an excess of this or that ingredient exists in the system and is eliminated from it by the kidneys; while a few even yet seek for its ori-

gin in external circumstances, as the drinking of lime water, the use of certain articles of food and the like.

As long ago as in the early part of the present century Von Walther foreshadowed the idea that stone was a local disease, but he was so imbued with the contemporaneous belief that some abnormal condition of the excretory fluids was necessary, that he enunciated the belief that two conditions were necessary for the formation of a stone, "besides the *excessive production of uric acid*, a change in its quality, at least in reference to its degree of oxidation, and a more or less copious secretion of a connecting gluten," (*vide* Chelius' System of Surgery, vol. III, p. 238); and Dr. Murchison in his Croonian lectures, delivered before the Royal College of Physicians in March, 1874, maintains nearly the same opinion when, after stating that lithic acid constitutes five-sixths of all renal concretions, and of vesical calculi which have only recently descended from the kidney, he says: "The circumstances favorable to the precipitation of lithic acid are catarrhal and other morbid states of the urinary passages, and an acid state of the urine."

Magendie insists upon an excess of uric acid, a diminished quantity of urine, and a diminished temperature of the urine as the causes: while Wetzlar thinks that "*a free state of uric acid*" constitutes the lesion.

Dr. Lionel S. Beale admits that "the deposition of a calculus does not always depend upon the state of the urine, for it is possible that the urine may be healthy while a stone is forming," and he attributes the formation of the calculus to "changes upon the surface of the stone itself which predispose to a deposition of the ingredients of the healthy urine." (Op. cit. 3rd ed. p. 403.)

Dr. William Roberts thinks that stone may be formed first, by an excessive proportion of the precipitated ingredients of the urine; second, by a too acid state of the urine; third, by an alkaline state of the urine; fourth, by deficiency of the chloride of sodium and the alkaline phosphates. (Roberts on Urinary and Renal Diseases, p. 419.)

These opinions, conflicting and unsatisfactory as they are, suffice to show the general direction the professional mind has taken in the investigation of this disease; and as samples of the conclusions arrived at, they render apparent the utter futility of seeking for the etiology of the disease in this direction.

I believe any explanation of the causes of calculous disease, based upon diathetic conditions alone, causing variations in the component elements of the urine, to be radically erroneous, and wholly insufficient to account for the phenomena presented. The accidental ingredients of the urine and the variations in their relative proportions depending upon diet, disease, external temperature, etc., and influenced by the peculiar diathesis of the system, are very unstable and subject to transient and varying circumstances. The kidneys are one of the principle depurators of the system, and as varied as are the conditions under which it is placed, will be the ingredients of the urine, and its consequent depositions, and as little stable.

Who has not suffered from lateritious deposits of uric acid after a glass too many of claret for dinner? And what student has not had phosphatic sediments in his urine while preparing for the green room? But these do not constitute stone, nor are they permanent conditions, but cease upon the removal of the exciting cause. They possess no qualities of cohesion, and it would be as feasible to make a rope of sand as to fabricate a calculus from the brick dust sediments of uric acid found in the urine after a convivial indiscretion.

These deposits would never be of a character to form a concrete mass without the presence of some other element, some connecting medium, whose office it is to aggregate the crystals into masses, in the form and shape of calculi, and hold them there.

This element, this bond of union, the diathetic hypothesis does not and cannot supply, nor can any purely chemical view of the phenomenon, based solely upon the crystallization of the salts of the urine, account for the peculiar formation of these bodies.

They present a singular regularity in the arrangement of their particles in concentric laminæ, etc., wholly unlike any other form of crystallization with which we are acquainted, in the body or out of it, and much more nearly approximating to vital processes, as shown in the formation of the oyster shell and other like organic bodies; and like such substances, their composition is not entirely mineral, but after the inorganic elements have been dissolved out, a basement structure of animal matter is left. The investigation of these chemico-vital processes belongs to the province of organic chemistry, and would require more time and space than would be proper in a paper like this, but I shall enumerate a few in illustration, without attempting their explanation.

The formation of the pearl in the shell of the pearl oyster is a striking illustration of this class of processes, especially as it takes place in a situation accessible to inspection in its different stages. "The substance of the pearl is nominally deposited upon the interior surface of the shell in the form of a slimy secretion of the exterior of the mantle. Grains of sand, or other foreign bodies lodging between the mantle and the shell, produce an irritation of the delicate tissues which causes

the deposition of pearly matter around them for protection." (*Vide* American Encyclopedia, art. Pearl.) Pearls are produced artificially by the Chinese by boring holes in the shell of a fresh water mussel, and introducing an irritant as a means of exciting the deposit. The absorption of saline matters by this "slimy secretion," or protective mucus from the surrounding fluids, whether of the oyster or of the sea, necessary to its solidificatian, is undoubtedly due to an elective affinity which the mucus has for these particular salts.

Another illustration of the process of the absorption of inorganic elements by an animal structure, is found in the egg of the fowl, which is formed in the ovary without a shell, and it is in another part of the generative passage (the fallopian tube) that the lime necessary for the solidification of the shell is furnished.

But it is not necessary to go so far to find a still more striking illustration of this principle, in the formation of the teeth in the dental sac. There three distinct tissues, viz.: enamel, dentine and cementum, are formed; first, as a pulpy mass, and afterwards solidified by the affinities of the different sets of cells, each selecting different proportions of the inorganic substances secreted by the lining membaane of the sac, and in the case of the enamel forming salts of silex and fluorine, different from all other tissues of the body, as well as from those of the dentine and cement formed simultaneously from the same fluid within the same little sac, and, like in the calculus, this animal plasma may be shown after the removal of the mineral ingredients.

No explanation ignoring this all-important factor in the problem can ever arrive at a solution of the question. The first point, then, is to inquire what this connecting animal sub-

stance is, and more important still, where and how it is formed, for without it no stone can exist.

It is undoubtedly a perverted secretion of the mucous membrane of the urinary passages, one of the albuminoids or colloids, as claimed by Rainey and Ord, the product of inflammatory action.

This abnormal secretion so reacts upon the *healthy* urine as to cause it to precipitate certain of its ingredients, the chemical constitution of which is determined by the part of the urinary tract in which this catalytic action upon the urine takes place, uric acid and its derivations being deposited in the kidneys, and the phosphates in the bladder.

In other words, the pathological condition which gives rise to calculous disease is local in its character, and consists of an inflammation of some part of the urinary tract, causing the secretion of an albuminoid substance, which determines the crystallization, in a spherical form, of certain of the salts of the healthy urine, varying with the part of the passages in which the inflammatory action exists, and which, at the same time, serves as a bond of union to their particles.

There are several reasons which occur to me as sustaining this belief:

1. That such a process is sufficient to cause a calculus is shown by the researches of Mr. Rainey, who has demonstrated that when saline matter crystallizes in a viscid substance, like gum or mucus, it takes the spherical form, instead of assuming the usual crystalline character. (Beale, p. 404.)

Does not this fact explain the way in which the first step in the formation of a stone is taken? A low grade of chronic catarrhal inflammation in the kidney causes a "viscid" albuminoid secretion to be formed, which has an affinity for cer-

tain of the salts of the otherwise healthy urine, and in which they are "crystallized in the spherical form" seems a more rational explanation of the origin of the nucleus of a calculus, than that of "clots of blood, plugs of inspissated mucus," or "mammoth crystals," so often given.

2. A reason for believing that stone is not due to external causes is found in the fact that there exists no chemical relation between the substances employed as a diet or beverage and the constituents of stone, there being no material of food containing uric acid as such, and but few oxalic acid, while very few calculi have a lime basis. There are no laws by which we can, with any degree of certainty, foretell the chemical character of a stone in a given case; only by an analysis of the urine at the time, or by an inspection of a fragment of the stone, or from certain of its physical characters as revealed by contact with the sound, can we form an idea of what it is composed, which would not be the case if it were due to any permanent external cause, which being ascertained, would indicate the effect produced by it. Stone is also governed by no chemical laws in its geographical distribution that we have been able define, existing alike in limestone and freestone regions, and notably in the case of Holland, in which country Ran cut over 1500 cases of stone, while the geographical peculiarities of the country preclude the use of any but rain water, to such a degree that a late article notes the prevalence of mollites ossium among the Dutch in consequnce of the absence of calcareous salts in the water drank.

Again, the chemical constitution of stone is not the same in different persons in the same climate, exposed to the same apparent exciting causes, nor will the same stone in one individual present throughout the same composition. I have removed

uric acid, oxalate of lime and phosphatic calculi from persons of the same neighborhood, and subject to the same external circumstances, so far as could be judged; and a phosphatic calculus frequently, or perhaps generally, has a uric acid or oxalate nucleus of greater or less size.

3. A strong reason, to my mind, for believing stone not to be of a diathetic nature is found in the fact that the removal of the calculus by operation is generally a radical cure of the disease. Who will pretend that the removal of a local manifestation will cure a diathetic disease? Would the cutting out of a chalk stone from the knuckle of a gouty subject cure the gout? Or would the removal of all the sugar from the kidneys and bladder cure a case of diabetes mellitus? Then why is the operative proceedure, in the large majority of cases, *curative* of stone? Simply because it is a local disease, a peculiar form of local inflammation, which is relieved, as are other local diseases, by removing the cause.

4. The fact that but one kidney is usually effected with calculous disease is also a striking agument in favor of its local nature.

Simon, in ten cases of his own, found both kidneys to be involved but three times, the calculi being uric acid, and in twenty preparations in the museums of Heidelberg, Strassburg, Basil and Freiberg found calculous deposits in both kidneys in but eight cases. (Chirurgie der Nieren, part 2, p. 71.) He says, in discussing this phenomenon, on pages 115–6, that in these cases of uninephritic stone of long standing, where the same urine has passed through the healthy kidney in even greater quantity than usual, from its performing a vicarious duty for the diseased one, if the formation of the calculus were due to an abnormal state of the urine, the healthy kid-

ney would necessarily become involved in the morbid process, and before death the affection would always become bilateral. But he says the local cause necessary for the formation of a calculus is wanting, such as a foreign body or a catarrh. Sometimes the diseased kidney is found so disintegrated as to cause its secretion to be entirely suspended, and yet the other kidney is found entirely free from the disease.

He thinks that the extirpation of the diseased kidney is preservative of the healthy one by avoiding what he calls "sympathetic suppuration."

But while thus admitting the necessity for a local cause, he seems also to consider the presence of uric acid in the blood as a necessary factor, where it may exist without causing any symptoms, and be only made manifest when some local disease is established; and cites in this connection the fact that in 500 cases of gout collected by Scudamore, an affection in which uric acid does undoubtedly exist in the blood, in only five cases did stone coexist. (p. 116.)*

Finally, a diathesis is understood to be a more or less permanent condition, exposing its subject to a manifestation of the latent tendency upon every recurrence of the exciting cause, but we know that not to be so in case of the removal of the stone, and even during the period of its growth there are long intervals of rest, and a total change in the characters of the concentric layers often takes place. Will an oxalic diathesis, accompanied with an acid reaction of the urine, change into a phosphatic diathesis with ammoniacal urine, with no al-

*I was not acquainted with the views of Simon at the time I read this paper, and am indebted to my friend Dr. Hadra for calling my attention to, and furnishing me a verbal translation of, parts of this most valuable work, which, so for as I am aware, has not yet appeared in English.

teration of the patient's habits or surroundings? I think a more rational explanation of the change can be given.

Having stated my reasons for believing stone not to be of external or diathetic origin, and having shown how it may be formed by local action, I shall now try to give some reasons for believing that it is so formed. They have necessarily been set forth to a great extent in the discussion of the preceding propositions, but there are several reasons which occur to my mind in support of these views additional to those already stated, one of which is the fact that the retention within the healthy bladder of foreign substances, as a metallic catheter, bullets, spiculæ of bone, and the like, almost invariably cause a phosphatic calculus to be deposited upon them. The deposits upon catheters are too well known by all who have had occasion to leave them in the badder for any length of time to require comment. In the late war there were twenty-one cases reported in which vesical calculi were removed by lithotomy, of which the nuclei were foreign bodies, accidentally introduced into the bladder, such as projectiles from fire-arms, spiculæ, etc. (*vide* Med. and Surg., History of the War of the Rebellion, Surg. vol. 9, art. 2.) These foreign bodies could exert nothing but a local action, could cause none but a local disease, and they were mainly phosphatic, just what would be looked for in an inflammation of the coats of the bladder, although in one or two cases the inflammation seems to have extended up the ureters to the kidneys, from continuity of surface, and caused some uric acid to be intermixed with the phosphates. The presence of these bodies could give rise to none of the usually ascribed causes of stone, were entirely local in their action, and when removed, in a majority of the cases, the disease was cured.

Another striking illustration of local agency in the formation of calculi is found in the ravages of the *bilharzia hematobium* in the kidneys of the Egyptians, causing stone to be an endemic disease in Egypt, as shown by the researches of Bilharz and Griesinger. This entozoon, by its presence in the mucous membrane of the large intestine, also causes dysentery, while in that of the kidneys and bladder it produces gravel and stone (Roberts on Urinary and Renal Diseases, pp. 216 and 490). Who will pretend to say in such a case that there exists an oxalic, uric or phosphatic diathesis any more than a dysenteric diathesis?

These views are strengthened and still further supported by the history of analagous depositions in other organs, arising from local inflammatory action. Recent investigation tends to show that salivary calculi (by which are meant calculous formations in the substance and ducts of the salivary glands, and not the incrustations upon the teeth, so called by the dentists) are produced by inflammation of the mucous membranes, and are not the result of mere deposition; and atheroma of the arteries and cardiac valves is believed to arise from direct inflammation of the coats caused by the presence in the blood of lactic acid, as well as the lesions of the valves following rheumatic endocarditis. The production of sesamoid bones in tendons exposed to pressure, causing an inflammation of the tendinous structure, is another illustration of the same pathological process, as are also the calcareous cataract, which is always the result of an inflammatory process within the globe of the eye, frequently the result of direct violence, and the formation of calculi in the lachrymal sac and duct, and in the meibomian glands which are usually the sequences of catarrhal inflammation of the conjunctiva and its appendages.

The difference in the chemical constitution of calculi, being due to the particular locality in the urinary tract in which the reaction upon the urine takes place, is easily accounted for when we recollect the analagous phenomena found in the female generative organs, the uterine secretions of which are alkaline, while the vaginal are acid; just as the secretion of the kidneys is acid, and that of the bladder alkaline, as is shown by the reactions of the urine in nephritis and cystitis, respectively. I have no reasonable doubt that if it were possible to place a catheter in the pelvis of the kidney, a calculus of uric acid or oxalate of lime would as assuredly form upon it as does a phosphatic one upon a similar irritant in the bladder, and in the same way, by causing a local irritation of the mucous membrane.

That the crystallization of the salts of the urine is determined by the secretion from the mucous membrane, and not by the foreign body itself, may be inferred from the fact that the catheter, or other body, would not cause such a deposit from the urine outside of the body, while its introduction into an otherwise healthy bladder, containing normal urine, will invariably excite the deposition. It is true that crusts will form from the evaporation of urine in the urinal, but they are mere aggregations of crystals, and do not present the "sub-morphous" structure peculiar and essential to calculi.

But it is not to be inferred that every cystitis or nephritis will cause a stone; the inflammation may be high, and the secretion of mucus, or muco-pus, very abundant, and yet not be of such a viscid nature as to agglutinate the urinary crystals together and impart to the mass the semi-organic peculiarities necessary to constitute a stone, while, by its presence, it may precipitate them from their solution in the urine. This is fre-

quently seen in a patient who has a growing stone in the bladder who will void at times large quantities of *gravel*, and the same thing often occurs from the use of medicinal substances, notably of certain mineral spring waters, where the precipitate from the urine will be voided as a fine sand, by the action of the waters in diminishing the viscidity of the secretions from the mucous membrance, thereby unfitting them to serve as a "connecting gluten" to the crystals.

It is not to be denied, however, that accidental conditions of the urine may favor this process or retard it. When an acid condition of the urine is caused by indigestion and imperfect assimilation, more uric acid will be excreted than can be appropriated by the stone in its growth, or than there is of organic material in the mucus to fix it upon the surface of the stone, and it will be voided as gravel. In this condition, by rendering the urine alkaline and increasing the quantity of water in it, the "attack of the gravel" will be relieved, and the growth, or formation, of a stone may be, and frequently is, checked. The reverse applies to alkaline phosphatic urine, caused by prolonged suppuration, insufficient food and general debilitating causes. These conditions may, and doubtless often do, favor the *growth* of a stone, but, as before shown, they are insufficient to *cause* it.

The formation of a stone is a slow process, and I take it the action which produces it must necessarily be of a low and persistent grade—essentially chronic—as may be seen in other mucous membranes when inflamed; for example, in the Schneiderian membrane an acute coryza causes a copious secretion of liquid mucus which is readily expelled, and it is only in the chronic form of ozœna that the viscid, tenacious and glairy secretion is exuded which forms the hardened and compact

masses so difficult to get rid of in such cases. So I conceive it is in the similar conditions of the mucous membrane of the urinary passages. An acute catarrh, whether of the kidneys or the bladder, is accompanied with a free secretion of mucus, which is washed away and discharged with the supernatant urine, and it is only in the more chronic forms that the viscid, tenacious substance is formed of which we treat.

A great deal of labor and ingenuity have been wasted, I think, in investigating the nucleus of calculi. It would be about as profitable and satisfactory to search for and study the nucleus of a hail stone, as both are probably formed in about the same way, viz.: by the operation of those physical laws of attraction which make particles tend to arrange themselves in a spherical form under certain circumstances.

As sugar candy will crystallize by preference upon the threads which the confectioner suspends in its crystallizable solution, so will the urinary salts crystallize upon any accidental nucleus present in their solution when it has been prepared for the act by the reaction upon it of the secretion of the mucous membrane before described; but the same process of crystallization would in both cases have occurred had there been no thread or nucleus present; in fact, it is well known that a large majority of vesical calculi originate in the kidney, and present no nucleus beyond a central mass of uric acid crystals formed, beyond a doubt, in the manner described by Mr. Rainey, before referred to, and his conclusions do away with the necessity of an initial nucleus.

It is in what Sir Henry Thompson calls a "*model calculus,*" that we can best trace the formative process. Unmixed calculi are comparatively rare. What usually happens is about as follows: From some accidental cause, as the checking of cuta-

neous perspiration, a catarrhal inflammation of the mucous membrane of the pelvis of the kidney is produced, not perhaps sufficiently acute to constitute a nephritis, but rather of a low, chronic grade, in which a tenacious viscid albuminoid mucus is secreted; this reacts upon the urine in a way determined by its own chemical affinities, causing a crystallization of uric acid to occur, which, from taking place in a "*viscid substance, assumes the spherical form,*" and a minute uric acid nucleus is originated. This, by its presence, continues or augments the irritation, and it increases in size, being always enveloped in the viscid mucus in which the crystallization continues until it becomes sufficiently large to excite a reflex contraction of the muscular fibres of the ureter, and consequent expulsion from the kidney into the bladder. But its removal from the former does not at once relieve the mischief already done; the morbid process established by its presence continues for a time, and accretions from the acid elements of the urine separated in the kidneys continue to be received for a while after its arrival in the bladder. Soon, however, its presence in the bladder causes its mucous membrane to become inflamed, just as it would from the presence of any other foreign body, and its alkaline secretion, possessing the same viscid qualities, but different in its chemical affinities, reacts upon the urine, causing the phosphates to crystallize out of it, upon what has now become a nucleus, and for a while the two processes are blended, the uric acid of the kidneys alternating and intermixed with the phosphates of the bladder. But finally the kidney trouble ceases, from the removal of the exciting cause, while that of the bladder increases from the augmented size of the stone, and its peculiar deposits predominate until the last layers will be found composed exclusively of the phosphates of

the bladder. Then you cut the bladder open, remove the irritating cause, place its inflamed coats at rest, locally deplete it by the incision, and "*causa sublata tollitur effectus.*"

Is not this whole process much more like an essentially local disease than a local manifestation of a constitutional affection? I believe that the facts set forth in the preceeding pages, and the deductions naturally to be drawn from them, will bear me out in assuming it to be so.

The tendency of modern investigation is to reduce very materially the list of constitutional or cachectic affections, and to localize morbid processes.

Virchow, by his researches in the cheesy deposits in phthisis, showing them to be the result of local inflammatory action, and upon dyscrasiæ in general, demonstrating that for the maintainence of a cachectic condition a local fountain of supply of pathogenic material in the more permanent tissues of the system is necessary; and our talented countryman Prof. Lewis A. Sayre, who, in the International Medical Congress of last year, so ably and successfully sustained the position that hip-joint disease, almost the typical form of constitutional scrofula, was a local affection, dependent upon injury to the joint and its resulting inflammation, and not due to the scrofulus diathesis, show the tendency that exists, both on this continent and in Europe, to seek for specific lesions to explain disease, instead of covering our ignorance under the high-sounding terms of "*diathesis,*" "*dyscrasia,*" "*cachexia,*" etc.; and the freedom with which we every day extirpate adenoid tumors of the neck, and like affections, in a way that would have horrified our preceptors with their theories about the "*scrofulous diathesis*" and the like, proves that a new era is dawning in medical ideas about many or most of the "*diatheses*" and we may hope soon to see them relegated to the domain of exploded theories to keep company with the humoral pathology "*et hoc genus omne.*"

REPORT OF COMMITTEE ON OPHTHALMOLOGY AND OTOLOGY.

By T. D. MANNING, M. D., CHAIRMAN.

It has been a matter of much consideration to adopt a plan for this report that would best fulfill the purpose of this Association. We recognize the fact that it is not intended for a body of ophthalmic and aural surgeons, and we therefore refuse to spend time in giving a mere history of the beginning, progress and probable future of this division of medicine. We also decline to engage you upon those mooted questions that could only be interesting to the specialist. The facilities offered for clinical observation of the diseases of the eye and ear are limited to so few cities in the United States, and the didactic teachings in many of those schools in which ophthalmology and otology are taught, are so generally upon details only interesting to specialists, that many graduates of medicine leave their schools unable to determine whether their patient has a redness of the globe as a result of iritis or conjunctivitis. Besides, there are medical men who are too remote from oculists to seek their advice in every case of eye trouble, and whose limited time and means may forbid a thorough acquaintance with the different eye affections only obtained from a voluminous text book. Their experience with any one particular class of diseases is necessarily so limited that it would

appear natural for them to crave the experience of every one in just such cases as they are most likely to have under their charge. We hope, then, to confine this report to the consideration only of practical points. If we fail to present any new and original ideas, we trust that we will not fail—actuated by great sincerity of purpose—to offer correctly a few of the little, and thought to be well known, things, which are, after all, invaluable to every medical man, and cannot, then, be too often repeated. We think the object of this report naturally precludes the consideration of any trouble which requires great proficiency in the use of the ophthalmoscope, otoscope, or knife, with which to establish a diagnosis or effect a cure; but persuades to the investigation of those affections, *simple, yet grave.*

METHOD OF EXAMINATION.—An easy, correct and uniform method of examining a patient with diseased eyes is all-important. In this the quick perception and close observation of the surgeon may be beautifully displayed, and of all men there is a double reason why he should be the most acute and skillful observer. He will not fail, at first sight, to fix his eye upon his patient and note every movement of muscle and limb; distinguish the bold walk of the man who has lost all sight from the cautious, searching tread of the cataractous patient, with hands before his eyes to shade and favor dilatation of the pupils, and thereby obtain more light through the periphery or less opaque part of the lens; view a spasmodic condition of the lids, great intolerance of light with excessive lachrymation, and be prepared at once to search for foreign bodies or other irritating causes. It is best when a patient presents himself for examination to begin at once, and not to listen to the patient's preconceived ideas of his case. Unless the trou-

ble be traumatic in its nature—the cause then being well known to the patient—his statement as to what produced the diseased condition of his eyes can be of but limited advantage to the physician. If the affection be syphilitic or gonorrhæl in its nature, his history, far from enlightening you, will often be intentionally directed to mislead you as to the cause.

A patient should be seated for examination fronting a mild light—a window with a northern aspect is best—as we thus avoid the direct rays of the sun. If the light be still too strong, the surgeon may hold his own hand at different angles to shade the eye while he makes his observations. An irritable or inflamed eye, when touched with the fingers, becomes injected at once, and more or less suffused with tears, so that we fail to obtain a natural view of the parts, unless we make our first observation before fingering the lids. This we may do, by resting one hand upon the patient's head, while we scrutinize the brow, the external surface of the lid, its ciliary margin, and as much of the globe as may appear through the palpebral fissure. If there be no recent injury of the brow or lid, we search for cicatrices resulting from former injuries, which may point to some impairment of vision by injury done to a branch of the fifth pair of nerves. We note their size, location and direction, thus often being enabled to correctly determine the character of the injury, whether it was done by accident or by some previous surgery A very complete history of our case may be gained in this way without the assistance of the patient, and while we excite his curiosity by our accurate description of his case, we gain his confidence in our ability as physicians. A faulty position of the lids; failure of their motion from spasm accompanying photophobia, from their thickened condition, from a paralysis of some muscle;

any swelling, redness, or tumor of the lids; thickening of the ciliary margins; crusts or scales around the eyelashes indicating blepharitis marginalis; and any misdirection of the ciliæ will be duly noticed by the physician. These ciliæ may be often overlooked on account of their extreme fineness and white appearance, but with the aid of a two or three inch magnifying glass, the lid being slightly everted, with "the fact that the tears are drawn slightly around them by simple attraction," it will not be very difficult to discover them.

The palpebral and ocular conjunctiva will be next in anatomical order for examination.

The lower lid may be readily everted, exposing to view its conjunctiva, or internal surface, by placing two or more fingers on the skin just above the lower or orbital margin, and while the patient is directed to look upward, pull gently and steadily downward. This manœuvre, in the majority of cases, will expose to full view the lower retro-tarsal fold. In deeply set eyes this plan may fail to present to view the entire conjunctival cul-de-sac of the lower lid. In such cases, Arlt prefers to draw the lower lid away from the globe, and cause the patient to look downward. The conjunctiva is then put upon the stretch and we have no difficulty, with a favorable angle of light, in viewing its smooth and entire surface.

The evertion of the upper lid requires a little more skill, and yet it is so simple a process that one may easily attain great dexterity in its performance. The edge of the lid, together with the ciliæ, are seized by the thumb and index finger of one hand to be drawn downward and forward, while with a probe or pencil in the other hand horizontal pressure is made on the external surface of the lid, at the upper margin of the tarsal cartilage. The patient is now directed to look

downward, and the lid is turned upward over the probe, which may then be removed. If the lid be not firmly knit to the globe, but somewhat lax, and the surgeon have acquired some knack in the everting process, he may use the index finger of one hand to make external pressure instead of the probe. The conjunctiva should be searched throughout its extent, and especially about the centre and edge of the upper lid, for any foreign body that may have lodged thereon; for any abnormal vascularity; enlarged papillæ, or pterygiums; cicatrices resulting from a degeneration consequent upon a chronically inflamed condition, or as a result of a too severe and improper treatment. It will be almost impossible during this time to let the condition of the cornea escape observation. We note the characteristic condition of the cornea resulting from an incessant sand-papering process, on the part of a roughened lid; any turbidity, ulcerations or opacities resulting therefrom; conicity, staphyloma, deposits of lead and foreign substances imbedded, as coal, iron or rock.

The iris, or that curtain floating in the aqueous humor, behind the cornea, and in front of the crystalline lens, and in the centre of which is a dark hole called the pupil, will next deserve attention. It is here we will most likely discover the seat of disease, if great pain or so-called neuralgia exists along the supra-orbital region, thence along the side and back of the head, accompanied by great redness of the conjunctival, and sub-conjunctival tissue, with dread of light. These symptoms being present, we would at once look through the transparent cornea down upon the iris, and examine if there be any change of color, if the size of the pupil be diminished and indisposed to dilate when the eye is shaded by the hand; all these being symptoms of inflammation of this floating curtain. Through

the pupil, enlarged if necessary by atropia, we may push our examination still farther and determine the condition of the crystalline lens. If the lens be in a healthy state it cannot be seen well in a young subject on account of its transparency. If it be diseased it will present a milky or cream-like appearance, a pathological condition, only differing in degree from the physiological change of old age, and which is denominated cataract when there is a corresponding failure of sight. The other and deeper parts of the eye will require the use of the ophthalmoscope to investigate their pathological changes, and will not, therefore, be considered in this article.

It will be well enough to note that the method of examining children with eye-troubles differs from that of the adult. Every physician is aware of a child's timidity, and especially of its averson for the fixed gaze of a stranger. He soon learns, even when searching for disease located most distant from the eye, to avoid the child's constant looks. When the disease is located in the eye itself of the child, and our examination must necessarily be confined to that organ, we must exercise great tenderness, patience, and some stratagem. The child's attention may be engaged for a moment upon some object, and thus give the physician an opportunity to glance at the cornea, and see if any ulcerative tendency exist in this tissue. However, when considerable photophobia and extensive swelling of the lids prevent this quick, but often satisfactory examination, we will be frequently necessited to practice some force. The child's head may be confined between the knees of the physician, while the nurse, sitting in front of him, holding its body and legs in her lap, also holds its hands. The surgeon's hands are left free, and he may evert the lids as described above, or use an elevator to raise them and give a

full view of all the parts beneath. Should this method of examination still be unsatisfactory, he may resort to the use of chloroform.

THE EYE-LIDS AND THEIR AFFECTIONS.—We find in the lids of the eye several different anatomical structures, some of which are common to other parts of the body, with perhaps slight modifications. These folds of the general integument, technically termed palpebræ, when closed, form a complete basement membrane for the cone-shaped orbit, and taken as a whole, must be viewed as a very complex structure. Within this small bit of flesh we recognize skin, muscle (organic and inorganic), ligament, cartilage, sebaceous glands, hair-follicles, blood vessels, nerves, and a mucous lining called conjunctiva. Each lid has two borders, an outer or orbital border, which is attached to the outer edge of the orbit, and an inner border or free margin, which marks the boundary of the palpebral fissure; the latter being the horizontal space between the upper and the lower lid. There are two lips to the rather thick free margin: an outer rounded lip, holding the lashes or ciliæ, and an inner right-angled edge which gives exit to the ducts of the tarsal glands.

Blepharitis is a general term for inflammation of the lid. Several forms of it are mere repetitions of what may be found at any time throughout the common integument, and with which the general practitioner is perfectly familiar. Indeed, the similarity of the diseases of the lid with those of the general integument are so marked, (together with the easy access we have to the lids), as to place all the affections of these parts as much under the control of the general practitioner as under that of the specialist. Eczema, erysipelas, herpes, warts, tumors, naevi, acne, and abscesses, located in the lids, should

be treated as when found in other parts of the body. It should be remembered, however, that affections which might be considered unimportant if found elsewhere, in the lids "would require special attention on account of their peculiar relation to the organ of vision." For instance, we would be more concerned about the resulting cicatrices in dealing with warts, naevi, or superficial tumors of the lids, than if these were located on the arm or leg. Sub-cutaneous naevi, and all manner of tumors, whether encysted tumors, tumors of the tarsal cartilage, chalasia, etc., and wherever located in the lid, are subject to the same prognosis and treatment. Any kind of tumor found in the lid disposed to increase in size, or at all chronic in its stay, should be removed at once by surgical procedure. The location of the tumor nearer the skin or the conjunctiva will determine which surface of the lid will be chosen through which to make our extirpation. If, on everting the lid, the conjunctiva should appear smooth and of natural color, I would always make my incision through the skin; never through the conjunctiva unless it be much involved by adhesions, change of structure, etc. It should be our practice to never scar the conjunctiva if possible to avoid it. There is no surgery throughout the body in which the use of the scissors is as universal as in the surgery of the eye. We find that in making incision through the skin of the lid over a tumor, no instrument compares with the fine probe-pointed scissors bent to an obtuse angle on the edge. A small puncture will be necessary to first introduce the blade of the scissors, and then it can be pushed along in the sub-cutaneous tissue with the greatest ease and precision. A scalpel will be required to do any dissection after this. In removing tumors when there is likely to be any dissection of the sac, the hemorrhage may be almost

entirely prevented by using Desmarre's forceps. One blade of these forceps has a broad, thin, slightly oval plate for an extremity, which may be slipped under the lid, while the extremity of the other blade—a ring of the same circumference as the plate—is pressed upon the external surface of the lid by a screw, including the tumor in its fenestra, and thus prevent any flow of blood during the operation. I am never content with merely breaking into these tumors and scratching the sac walls, with a view of obliterating the sac by inflaming and growing its sides together. I always endeavor to remove the entire or a great part of the sac with its contents. To do this effectually the sack must not be punctured during the performance, or it will collapse and then be more difficult to remove. The after treatment, if the incision be made through the skin, requires nothing more than bringing the lips of the incision together with fine silk sutures, and annointing the parts occasionally with a mild carbolated oil. Instead of the oil, styptic colloid or collodion may be substituted, if convenient, or the wound may be simply closed by a piece of court plaster, and left to time. If the incision be made through the conjunctiva, no particular treatment is required beyond bandaging down the lid, which will close the wound, and also prevent the disagreeable scratching sensation, produced by the lips of the wound rubbing on the globe during the act of winking. Of course the parts must be kept well cleansed.

Wounds of the Lids.—The lids may be the seat of contused and incised wounds, in which case all the parts should be brought together and held by as many sutures of fine silk as will insure apposition. The sutures, if necessary, may pass through the entire thickness of the lid, or may, with equal propriety, be inserted upon the conjunctival surface. The

form of the lids should always be preserved, if possible, and therefore we must save all the available tissue after an injury done to these parts. It should be remembered that, on account of their abundant "blood supply, and hence their great reparative power, * * * portions hanging even by a shred may be preserved." If the injury should pass through the lid, and involve the globe of the eye, our great care must be exercised to prevent union of the palpebral with the ocular conjunctiva at the points of injury. A union between the lid and the globe, technically termed symblepharon, may impair the function of the eye very materially by confining the lid immovably in front of the pupil, even if the refractive media have resisted the injury. If the globe of the eye should collapse from the injury, and this symblepharon be not guarded against, it will present an almost insurmountable difficulty in the way of properly adapting an artificial eye. No specified rules can be given by which this deformity may always be prevented. The peculiarities of each particular case must be met and controlled by the inventive powers of the surgeon. A short time ago I was solicited by a medical man to visit a patient with him. Several days previous the patient had received a clean cut with a sharp knife passing through the upper lid into the globe of the eye. I found that the globe had collapsed, and a general inflammation (panophthalmitis) prevailed. There had been no care bestowed upon the lid, not as much as securing the cut edges by a sature, but the lid had been pressed down all the while upon the parts beneath by a compress bandage. The result was a firm adhesion of the ciliary margin of the lid to the coats of the eye, producing an ugly deformity when well. I was recently called upon to prepare the lids of one of these neglected cases for the recep-

tion of an artificial eye. This was many months after the injury had been received and all inflammation had disappeared. I endeavored faithfully and studiously to remove these irregular connecting bands between the lids and the stumps and succeeded, but with indifferent success. True, I succeeded in fitting an eye, but not without marked and noticeable deformity.

Blepharitis Marginalis.—In referring to the anatomy of the lid, I made mention of its free margin, or inner border, being divided into an outer and an inner lip; that the outer lip held the eye lashes springing up from the hair follicles beneath, the latter accompanied by their sebaceous glands; and that the inner lip gave exit to the ducts of the meibomian glands, which are situated mostly in the substance of the tarsal cartilage, or the skeleton of the eyelid. Besides these, we find sudoriparous glands, all of which satisfy us that the lids are richly supplied with these secreting sacs. It is by these numerous glands we are furnished with "the only tumors peculiar to the eyelid," (brought about by the obstruction of their ducts or orifices), and which have been referred to above. These hair follicles and their sebaceous glands, and the tarsal or meibomian glands, when inflamed singly or together, furnish us a troublesome disease. Some specialists are pleased to furnish a separate name for an inflammation of each of these classes of glands, thus needlessly multiplying our nomenclature and unnecessarily perplexing the student of medicine. Why not include a diseased condition of them all under one name in common, since the same character of disease exists alike in each gland, and is amenable to the same treatment? An English author, in writing of this affection, begins thus: "Perhaps the most important of the diseases proper to the eyelids, fortunately as rare in private practice as it is common among

hospital patients in towns, is one which has received a great variety of names in its different stages. It has been called tinea tarsi, ophthalmia tarsi, lippitudo, and I know not what besides." He is accustomed to call the disease "blepharitis," in preference to "follicular inflammation of the eye-lids," but I prefer to call it by the more expressive name "blepharitis marginalis."

The disease is essentially an inflammation of the lining membrane of the hair-follicles, with an ulcerative tendency, but may exist in any of the neighboring glands, either primarily or secondarily. Indeed, it is very difficult for it to exist in any one class of these glands for a time without spreading to all the others, on account of its contagious character or tendency. The disease is easily recognized by the appearance of redness and swelling along the outer lip of the lid and around the ciliæ. Small pustules spring up around the roots of the lashes, and are generally tipped with a crust-like formation, glueing the neighboring ciliæ together. These crusts or scales are dry purulent collections, and form very rapidly when removed. If these collections be taken away, a distinct ulceration may be noticed beneath, including one or more ciliæ, and particularly so if the trouble have existed for some months. This affection has, seemingly, a special fondness for locating itself in the upper lid. It may appear in only one or two follicles, its apparent selective tendency being due, perhaps, to the greater supply of follicles and glands in the upper than in the lower lid. There can be no mistake in diagnosing the affection, as there is no other disease of the parts that produces crops of pustules around the roots of the lashes with ulcerative mouths, most generally covered with rapidly forming scales, binding a number of ciliæ together, until, as I have

seen, the whole row of lashes may present a regular saw-toothed appearance. The patient may not recognize, for a time, that he is an actual sufferer, as the trouble can exist *per se* without producing more than an itching sensation, with a disposition on the part of the patient to finger the lids. The lids are soon a little swollen, and on awaking in the morning are more or less agglutinated. If these symptoms be urged by the patient, we may, at once, begin our search for the characteristic crusts around the lashes, and the small ulcerative pustules beneath. Blepharitis marginalis is by no means a rare affection with us, as appears to be the case with our London brothers. In Texas, where the ever constant winds of a variable temperature, rendered still more irritating by conveying the characteristic lime dust of the prairie, and which is madly dashed into the eyes of every out-door laborer, and every traveler, together with the excessive glare he experiences, we wonder not to find this, as well as other affections, a frequent visitor. Poor food, bad clothing and filthy habits are thought to favor the disease, and no doubt do, to a great extent; but then we see it very often among the *elite* of the land, who have plenty of this world's goods, and are scrupulously clean in their habits. We frequently see it among painters, and it is particularly noticeable in persons of florid complexions with red or sandy hair. "The same morbid process is repeated here, which in other parts of the body is called acne." In that affection, so in this, there appears to be a predisposition on the part of some individuals, and especially at certain periods of life—during puberty, for instance—to cell proliferation of the inner walls of these marginal glands, increasing greatly the glandular contents in quantity and quality.

The treatment is simple, and in the great majority of cases, is exceedingly satisfactory, provided the physician gives his personal attention to the application of remedies, and does not trust too implicitly to the applications by his nurse. There is scarcely a disease peculiar to the eyelids that requires more scrupulous cleanliness in its treatment, or a greater amount of persistency on the part of the physician, to effect an entire eradication of the trouble, than blepharitis marginalis. There is a rapid accumulation of the crust-like formations around the lashes, and at the mouths of the inflamed ducts, and this so thoroughly precludes the possibility of bringing the remedies in direct contact with the inflamed parts beneath, that only one who understands the nature of the trouble is prepared to prosecute the treatment effectually. You may remove these scaly coats entirely, and, in fifteen or twenty minutes, a transparent film of the same morbid secretion will have covered the ulcerations again. It is quite necessary to be very gentle in cleansing the edge of the lids of crusts, previous to the application of astringents. We will thus avoid undue irritation of the ulcerated points which bleed freely if handled roughly. If we are dealing with a mild case in which the crusts are thin and limited, a gentle ablution of the parts with tepid water, a little alkaline in reaction (our well water, in many parts of this State, being sufficiently alkaline) will free the lid of any extraneous matter, and prepare it for a mild ointment of the yellow oxide of mercury (gr.j—ij, ad ʒj of the vehicle). This ointment must be well applied with a camel's-hair brush around the roots of the lashes, and rubbed in satisfactorily with the finger. If the crusts be abundant and hard, well glued around the ciliæ, use much patience in getting them away. If warm water does

not suffice, then use warm poultices of bread or linseed meal. The poultices will not only soften the collections, but prepare the outlets of the follicles and glands so that the ointment will be better received. It is well enough to vary our treatment, now and then, by touching the extensive ulcerations with a five or ten grain solution of nitrate of silver. The mitigated stick will answer a good purpose, and has the advantage of being better controlled. Carbolic acid, full strength, followed immediately by an application of olive oil, will sometimes prove advantageous. A fine probe may be dipped in the acid and then applied to the ulcers. Sulphate of zinc, sulphate of copper, potassa fusa, etc., may all be used in their turn, one proving about as useful as another. The principle in using these being nothing more nor less than a change of treatment, which we do know, at times, hastens a cure, as the tissue is not thus allowed to become accustomed to any one remedy.

Hordeolum, or Stye.—This troublesome little affection is well known to, and readily recognized by the unprofessional as well as by the surgeon. Few persons have lived to adult age without being annoyed, at some time, by this unwelcome visitor. It is not necessarily located in the tarsal glands or the hair-follicles, as some writers contend. Instead of being wholly a glandular disease, it is frequently, indeed mostly, found in the connective tissue of the lids. Furuncular in its nature, it may appear at any time, without any assignable cause. The neighboring glands and hair-follicles may be encroached upon by the inflammatory process, and even included, resulting in a total destruction of their lining membrane. If many of the hair-follicles be involved, we may expect a permanent deformity, due to the absence of the lashes. It is not

necessary to dwell long upon the symptoms indicating the appearance of this not very formidable affection. The angry little pimple on the edge of the lid rapidly forming into a sac of purulent material; the peculiar stinging sensation which the patient can at once recognize, together with the red, and oftentimes œdematous lid will be sufficient evidence of what is to follow.

The treatment will be mainly directed to the preventing of the formation of the stye, if the patient apply in time. If no pus has formed, the application of a point of silver caustic, or the actual cautery, rightly applied, will frequently stay its progress and cause the redness to disappear. I have stopped the progress of the inflammation, even after a point of pus had formed, by the use of the caustic, but only to have it rest two or three months and begin again. When pus has formed, we should evacuate it immediately by a free incision, selecting for our point of incision a place between the two lips of the free margin of the lid, or through the external or internal surface of the lid, guided by the most prominent point of the swelling. It may also be well at times to consult the general health of the individual, particularly if there be a frequent recurrence of the styes. A stimulating ointment of the yellow oxide of mercury, or nitrate of silver, rubbed frequently around the edge of the lids, will also be a preventive in some cases.

Acute Conjunctivitis.—I will never be called upon to write a line or speak a word relative to the conjunctiva without feeling it to be my duty to urge the necessity of a thorough acquaintance with it and its diseases. Fully one-half the cases of blindness the specialist is called upon to consider, result from the fearful inroads of some type of conjunctivitis upon the globe proper. In our prairie State, where we have so many ir-

ritating causes, as wind, dust, etc., nearly three-fourths of all cases applying for treatment have been afflicted previously with it. Indeed, conjunctivitis, or the deformities resulting therefrom, almost monopolize the practice at times. The fact that all sporadic cases, and also epidemics of conjunctivitis, spread through the rural districts almost every year, leaving blindness and distress, as well in the homes of the rich as in the hovels of the poor and come directly under the charge of the country doctor, make it imperative that he of all men should consider well the diagnosis and treatment of this destructive affection. The apparent want of consideration for certain diseases of the eye, on the part of many physicians, is unaccountable. Whether they regard the eye as a part of the economy outside of the domain of medicine, or consider the affections peculiar to it as of small importance on account of the limited danger of immediate death, or that they regard these troubles as so complex and incomprehensible that all effort to acquire a perfect knowledge of them is paralyzed—I know not. I am fully persuaded that our text-books, in dealing so extensively with minutiæ, have a tendency to embarrass the neophyte in ophthalmic studies. This is especially marked in the consideration of the conjunctiva and its diseases. Instead of all the stages of inflammation of this membrane being considered under one name, conjunctivitis; and the divisions, catarrhal, purulent, blennorrhoeal, gonorrheal, diphtheritic, ophthalmia neonatorum, Egyptian, army, and such like mere names, indicative of the progress, the cause, or the age of the patient affected, many will allow themselves to be deceived into the belief that every one of these names represents a true and separate affection; that each one is produced by a certain specific cause, requiring a new and separate treatment. The truth is, all of

these names are arbitrary, and mean nothing more than conjunctivitis, after all. Dr. Carl Stellwag positively declares that, "It can not be too distinctly remarked that in these described differences there are really no essential different morbid processes; but in them only modifications of one and the same process are to be found. These modifications depend on various circumstances: on external conditions; on the severity and kind of noxious material; on the duration of the irritation; on the stage of the process; on the condition of the vessels; on the greater or less participation of the conjunctival nerves, etc. Indeed, all the distinctions between the different forms of conjunctivitis may only be carried out in theory. In reality, the forms of conjunctival inflammation, which appear to be strictly separated, run into each other by numerous intermediate forms and combinations, so that the form of conjunctivitis that may be diagnosticated will frequently depend on the manner in which the physician views the case. Besides, in one and the same case, the kind and quantity of the inflammatory product, as well as its distribution, varies with the severity of the proliferating process. It appears, then, as if one form of conjunctivitis may be developed from the other. For example, the process appears as a blennorrhoea, passes over into diphtheritis, again becoming a blennorrhoea, and finally gets well, under the symptoms of catarrhal conjunctivitis, or becomes trachoma, by hypertrophy of the conjunctival tissues. Just as frequently, mixed forms occur, *e. g.*, trachoma, with blennorrhoeal secretion, with continually relapsing herpetic efflorescences, catarrh with membranous patches on isolated portions of the conjunctiva; herpes, which is gradually combined with catarrh, with trachoma," etc.

Then let us do away with the idea of the conjunctiva being cursed with more than its share of different diseases, and con-

sider only acute conjuctivitis through its different stages; a disease, which, if timely and judiciously treated, is of all affections, as a rule, the most amenable to treatment.

The conjunctiva is a mucous membrane that has its beginning at the free margin of the lids, and as a lining of these appendages, is known as the palpebral conjunctiva. At their orbital border it is reflected as the palpebral folds, retro-tarsal folds, or cul-de-sac of the conjunctiva, on to the globe near its equator, and covers the anterior half of the globe up to the cornea, as the ocular conjunctiva. It has a basement layer and an epithelium, like other mucous membranes; has stellate connective tissue corpuscles, anastomosing by tubular processes with each other, and has a homogeneous inter-cellular substance between. "Each of the separately named portions of the conjunctiva has its anatomical peculiarities." Papillæ, resembling somewhat those of the dermis, are found throughout the conjunctiva; also three different kinds of small glands. "Thus we see that the conjunctival structure consists of the so-called adenoid tissue, that is, of a mesh-work of connective tissue fibres, with a large number of cells resembling lymph corpuscles." This mucous membrane is abundant in its supply of blood vessels and nerves. It is so intimately connected with the deeper structures of the globe through both of these sources, we wonder not when we find inflammation of one part sympathizing with another even located at a distance.

When an inflammatory process is going on in this membrane we note the following changes in order, as the inflammation increases in severity: The blood vessels pour forth white blood corpuscles which are pushed about in rows, anastomosing here and there until a net-work of vessels, including in their meshes connective tissue, wandering cells and serum, is

crowded into the texture of the conjunctiva. As the inflammation continues the young cells form into a layer beneath the epithelium, the deeper ones having a "lymphoid character," while the more superficial ones are epithelial in appearance. The superficial cells are constantly being excreted as neoplastic elements, or rather pushed out by the crowding in of new cells behind. We are reliably informed, to-wit: "In less severe inflammation the newly formed cells which are thrown off have chiefly the character of recent epithelial cells. They are, however, in part, presented under the microscope as mucus corpuscles, recognizable by their opaque contents, and their proportionably small nucleus." These cells are held together and form shreds of mucus which refuse to mix with the tears, and furnish the discharges characteristic of the catarrhal type of conjunctivitis, generally called catarrhal ophthalmia. "As the process increases in severity the elements become more and more removed from the epithelial form. They generally change into mucous or pus corpuscles," and it is then we have the characteristic muco-purulent discharge, indicating the passing from the catarrhal to the purulent stage. "In very severe cases, real nuclear cells at least cease to form. The neoplastic elements appear as incompletely developed nuclei, which are involved in rapid separation, or often in fatty degeneration." At this stage there is no separation of the discharge and the tears. The pus is mixed with the tears, and pours over the lower lid as a thick, creamy substance, indicating the purulent stage of conjunctivitis, and called in text books purulent ophthalmia, Egyptian ophthalmia, etc. "At the same time an inter-cellular substance is always separated, which, as it were, represents the menstruum in which the elements are suspended. * * * The so-called inflammatory secretion

* * * is nothing less than a mixture of the inter-cellular substance, with the described elements, thrown off from the surface of the conjunctiva."

We have, then, the gross or practical consideration of the change of structure, and the resulting excretion in every case of acute conjunctivitis, according to the severity of the inflammation; it matters not when nor how the trouble may be produced.

The general symptoms of acute conjunctivitis are very prominent, at least sufficiently marked to enable the medical attendant to be always satisfactorily accurate in his diagnosis. This can be the more appreciated when we consider that of all the organs in the human body, the eye and its appendages, when diseased, suffer most from faulty diagnoses. A mistake here, and a consequent misdirected treatment, will not leave us comforted by the thought that our patient's loss in consequence of our error is only a few more days of illness, but exposes him to irreparable injuries for life.

Burning, biting, itching sensations, the feeling as if a foreign body had lodged under the lid, redness, swelling, photophobia, a limited amount of pain, and the several different qualities of discharge, are the symptoms we most generally notice in acute conjunctivitis. These symptoms are more or less marked, according to the type or grade of the inflammation, and the extent of any complication. If we satisfy ourselves that no foreign body has caused the irritated condition of an eye, we have only one other set of symptoms to eliminate in order to determine the diagnosis of conjunctivitis. These latter symptoms will be those consequent upon inflammation of the deeper parts of the eye, and especially that of the iris. Photophobia, flow of tears, pain, and redness, are symptoms in common

with the inflammation of the conjunctiva and the deeper parts. Inflammation of the conjunctiva with no keratitis is accompanied by very little pain. Indeed, we may have an uncomplicated case of considerable severity with little or no pain. The aching sensation peculiar to iritis is very intense. It radiates from the supra-orbital region to the corresponding side of the head. Generally the cornea or the iris is involved if the patient complain of pain to any great extent. The redness of conjunctivitis is due to an injection of blood vessels having a tortuous course, and inosculating in all directions. They are superficial, approach the cornea from the retro-tarsal folds, and are easily displaced over the white sclerotica by friction, in contradistinction to the deeply located, immovable vessels we find injected when the iris is inflamed. The symptoms of conjunctivitis could only be mistaken for those of iritis during the first forty-eight or seventy-two hours after inflammation of the conjunctiva begins, when much redness, an increased flow of tears, and some photophobia may be present; never when the swelling is reducing, the conjunctiva becoming more lax, and the abundant discharges beginning to flow.

For all practical purposes, only two stages in the process of inflammation of the conjunctival membrane need be considered, as far as a guide to the application of remedies is concerned. These two stages may be denominated the dry and the secreting stage. This is the case whatever the grade of inflammation, the exciting cause of the inflammation, or the age of the patient may be. He who directs his treatment with regard to these two different stages will most likely always have pleasing results. The dry or non-secreting stage includes the first few hours of the attack, in which redness and swelling are prominent, but no mucus is present. The treatment

during the irritable period should be strictly anti-phlogistic, and not the use of astringents, all of which are irritating to a degree. Ice cold applications, removal of blood by leeches, by cupping, or by a canthoplasty, will generally afford relief. The division of the external canthus not only drains the parts of blood, but relieves the pressure of the swollen lid on the globe. It should be remembered that the conjunctiva must not be divided in performing the canthoplasty for the mere relief of an acutely inflamed lid, as would be requisite in a case of entropion. The danger in the former case would be the producing of an ectropion.

When the redness and swelling have reached their height (which will generally take place during the first two or three days of the inflammation), we will notice a change of color in the conjunctiva from the light red to a lilac or blueish hue, and the tight, swollen membrane becomes lax and wrinkled. The dry stage is now over, and the secreting stage begins. Very soon we will find shreds of mucus floating in the tears of the lower conjunctival cul-de-sac, and the lids glued together on awaking from sleep. This relaxed condition of the conjunctiva with the appearance of mucus, or mucus and pus combined, and the absence of the pathognomonic symptoms of iritis, such as a sluggish or contracted pupil, change of color in the iris, pain and the zone of red around the cornea, will establish the fact in the mind of the physician that his case is one of conjunctivitis in the secreting stage. An uncomplicated case of conjunctivitis of any importance always furnishes a discharge of some kind, while an inflammation of the iris alone never does. However, these two affections may exist in the same eye at the same time, and then present a combination of symptoms.

As soon as the secreting stage begins, the different astringents may be used with beautiful effect. The strength of each preparation should always be in proportion to the extent and severity of the attack. A solution of sulphate of zinc, sulphate of cadmium, alum, tannin, sulphate of copper, borate of soda, nitrate of silver, and many other medicines are used more or less indiscriminately. It is asserted by good authority that these solutions are all "equally efficacious, and it is all the same in this respect whether we use one or the other." It is claimed for sulphate of zinc that it "contracts the vessels more powerfully than any other agent except cold." A solution of two grains to the ounce of this salt most generally produces marked improvement in a short time. I greatly prefer it to any other salt, except nitrate of silver, in the treatment of a majority of cases. If this latter preparation be used in strength, varying from one to ten grains to the ounce of pure water, according as we have a mild case, a very severe case, or an intermediate grade of inflammation, we will often be delighted by its prompt and effective action. It is to be especially recommended in the treatment of the ophthalmia of young children. The strength of all astringents for ordinary use is one to ten grains to the ounce of water. If an odor is desired in making eye-washes, rose water or cherry laurel water may be used. A few drops of the latter in an ounce preparation will give sufficient aroma.

We will frequently find cases in practice, especially those of a mild grade, in which we will not always be able to establish in our minds, positively, when the dry stage leaves off, and the secreting stage begins. In these cases an early use of astringents will not prove deleterious. Where there is any doubt as to the propriety of using astringents, we have a medicine

with which to feel our way. Chlorine water is considered a very good astringent, and is by no means as irritating as the metallic salts. This may be used for awhile, at least, and if the inflamed membrane appear to bear it well, or a stronger preparation be desired, the zinc or silver may be substituted.

Attacks of conjunctivitis are frequently complicated with an ulcerative tendency on the part of the cornea. Such cases should always be anticipated so as to lose no time in the treatment. An author of some repute very concisely expresses it, that "severe pain, especially when accompanied by photophobia and a profuse flow of hot tears, indicates the parts connected with the ciliary nerves are involved in the process. When these symptoms exist, there is generally a severe injection of the episcleral tissue, and even herpetic efflorescences, a keratitis, superficial exfoliation of the corneal margin, etc. But where the even injection of the vascular conjunctiva renders it impossible to perceive any episcleral injection, we shall seldom err in supposing it to exist, and in taking the appropriate precautions."

The treatment in such cases should be non-irritating in every sense. Pieces of ice in a thin rubber bag constantly applied, and the use of a solution of sulphate of atropia (gr. ij—vj, ad ℥j) every few hours will be well received by the patient. It should be a rule to avoid the use of astringents or irritants of any kind where any undue irritation is present about the eye. The latter remedies can only be admissible in cases of ulcerated cornea, when the ulcer is chronic and indisposed to heal. If the condition of the conjunctiva demand the use of an astringent, at the same time an ulcer exists on the cornea, the lid should be everted and the medicine applied with a brush. After some minutes the application may be wiped away, and the lid replaced.

ACUTE IRITIS.—Inflammation of the iris should be viewed by us with special concern. In the first place, this tissue is subject to very frequent attacks of inflammation; and secondly, the rapidly formed and permanent deformities which result from neglect or improper treatment nearly always limit or completely destroy the functions of an eye. It may be considered an exception for a physician to practice medicine long without having a patient with iritis, for it is by no means a rare affection, and may "occur at all periods of life, even from the intra-uterine to extreme old age."

For all practical consideration we may only recognize two forms of iritis: one in which there is an exudative tendency, and the other characterized by a serous accumulation. It is with the former variety that we will be called upon most frequently to contend, the latter being comparatively rare in its attacks.

It would be a difficult matter to mistake a case of iritis for any other affection, if any care be exercised by the physician. The injection of conjunctival and sub-conjunctival vessels (especially the latter), deep seated, parallel and immovable, giving to the peri-corneal zone a pink red appearance; the paroxysmal, neuralgic pain following up different branches of the fifth pair of nerves, along the side of the nose, in the supra-orbital region, and thence along the corresponding side of the head, and which is more intense at night than during the day; the change of color in the iris (easily compared with the iris of the other eye when only one is affected); a more or less impairment of vision, and a sluggish condition of the pupil are unmistakable symptoms, most generally present in every case of iritis. In testing the mobility of the pupil it is quite necessary that an oblique light fall upon the eye under examina-

tion, and that the other be closed by a handkerchief or some other compress. The physician may then use his hand to shade the diseased eye, all the while watching closely the pupilary margin to see if it dilate when shaded, or contract when the light is admitted. If there be any reason to suspect the normal action of the iris, by this method of examination, a four or five grain solution of atropine may be dropped between the lids to see its effect. If there be no preventing cause, the pupil will dilate to its full extent within twenty or thirty minutes, and its round outline will be preserved. If inflammation exist, there is generally a very limited dilatation which takes place very slowly. The binding down of the edge of the pupil to the capsule of the lens in cases of exudative iritis, will take place within a remarkably short time. When this is the case the attached portions will resist the action of the atropine, while the remaining free portions will dilate in part, and give an irregular and often scolloped outline to the pupillary margin.

There is no discharge of pus or mucus in a case of uncomplicated iritis, nor is there any during the first or dry stage of acute conjunctivitis. It is necessary then that these two affections be not confounded in diagnosis. If there be doubt as to whether an iritis or a conjunctivitis be present, the treatment must be in favor of the iritis. This plan of treatment will not aggravate an attack of conjunctivitis, while any astringent used for the cure of an ophthalmia would greatly increase an iritic inflammation. No one, then, would think of introducing an astringent of any kind between the lids if his patient had iritis. He would rather choose a palliative course of treatment, both locally and constitutionally.

Atropine solutions, varying in strength from two to eight grains to the ounce of water, according as we have a mild or a

severe attack, will be indispensable in all cases of this affection. In very mild cases where the patient is seen soon after the disease begins, we may succeed in curing our patient by the use of the atropine alone. If the patient has had no attention for several hours after an attack develops itself, its severity being well marked by a ready disposition to pour forth a copious exudative material, and the atropine "fail to exert its customary influence" upon the iris, whether from paralysis of the muscle for dilatation of the pupil, or on account of a posterior synechia, we should begin at once the use of mercury in some form. The mercury should be pushed to the verge of ptyalism, and the patient held under its influence until the plastic material begins to disappear and the atropine gains its influence over the pupil. Mr. Brudenell Carter considers "resistance to atropine as the one sufficient proof that mercury is needed."

Syphilitic iritis has an exudative tendency, and so far as the general appearance of the inflammation is concerned, cannot be diagnosed from any other kind of plastic inflammation of this tissue. If there be no more evidence of syphilis in the constitution than the existence of an exudative iritis, we may greatly doubt its existence at all, and yet we would be warranted in the administration of mercury as though it did exist. We do know that the use of mercury would be imperative if our patient had syphilitic iritis, but it is not particularly necessary to wait for the presence of syphilis before we can be persuaded that the administration of this medicine is advisable. Whatever the cause may be, if there be a parenchymatous thickening of the iris during an inflammatory attack, and the neoplastic material is abundantly thrown out, together with the failure of the characteristic action of atropine, we must use mercury un-

til the patient is under its influence. Atropine alone, then, or atropine and mercury, will cure the great majority of cases of acute inflammation of the iris with an exudative tendency.

The serous variety of iritis is seldom met with compared with the plastic variety. Its symptoms are about the same as the latter. Instead, however, of a plastic material being present, we notice a rapid increase of the anterior chamber contents. The serous secretion soon gives a turbid cast to the aqueous humor, and fine lymph particles may be seen floating about in the aqueous humor, adhered to the posterior surface of the cornea, or settling at the bottom of the anterior chamber.

The treatment in this form of iritis will be the instillation of atropine, and paracentesis of the cornea if the accumulation be very great—never the use of mecury, unless some other affection demanding its use be a'so present.

MYOCARDITIS.

By EDMUND GOLDMANN, M. D.

The disease to which I intend to devote the following remarks is, fortunately, not very frequent. I do not allude to the cases in which the remnants of circumscribed inflammation of the muscular substance of the heart are discovered, after death, in the shape of tendinous patches, and in which the atrophied muscular fibre has been superseded by a newly developed fibrous tissue, which offers considerable power of resistance; nor do I mean to refer to those which are most apt to appear in the wake of purulent endocarditis, and which, by numerous emboli in the ramifications of the coronary arteries, lead to abscesses within the walls of the organ. Myocarditis proper, as I understand it, is parenchymatous. That is to say, it is the inflammation of the muscular elements of the heart, the infiltration, the progressive fatty degeneration, the dilatation or formation of cardiac aneurism, and the loss of the adequate power of the organ to propel the blood. The human body, like that of the mammalia generally, has unfortunately but one heart, and we might look almost with envy upon more fortunate animals of a far lower organization, for example, the fishes, which are supplied with accessory hearts. It is evident, therefore, that so serious an affection as the one mentioned can only terminate with death; and I might as well

close the chapter here, since all I have to say can hardly be of any avail to save the life of the sufferer, who is doomed to succumb, sooner or later, to its destructive power, were it not for the reason that its diagnosis is so very difficult, and that the following notes might help to facilitate it in some cases, and thus to forewarn those most deeply interested of the approaching fatal end, which cannot be warded off. My observations of this class of cases are not very extensive, but in those I have seen I have, or at least believe I have, found certain changes of rythm, which I feel confident future observations will confirm. These changes are not to be observed in such affections as insufficiency or stenosis of the mitral valves, nor are they met with in hypertrophy of the ventricles, etc. The difference consisted in the almost total suppression of the first sound, associated with which was a pulse so weak as almost to be imperceptible. The first time I had the opportunity to notice this symptom was in a hospital in Europe. A number of physicians and medical students witnessed the same. The first sound disappeared for a few beats, then reappeared, but indistinctly and muffled, and then disappeared again. All of us, who saw and auscultated the patient, attributed this singular phenomenon to a perverted state of the innervation of the heart, in consequence of which the segments of the valves did not close simultaneously. Our mistake was only discovered where, to our mortification, so many are found out—at the post mortem examination. In a subsequent case, in which the same auscultatory signs presented themselves, bearing in mind the error my confreres and myself had fallen into, I ventured to diagnosticate myocarditis, and the result proved the correctness of my view. The question naturally arises here, "what explanation is to be given for these changes of sound, and

what causes these symptoms?" I shall endeavor to answer this, even though my arguments may not be sufficiently strong to carry conviction to all. For the sake of order and logic and to give a fuller aspect of the pathological phase of the disorder in question, I must beg the permission of my readers to review some anatomical and physiological facts, which are familiar to every one who has studied the series of sciences, which compose that of medicine. The heart describes two rather complicated movements, the systole and diastole; the one contraction of the ventricles, relaxation of the auricles and closing of the auriculo-ventricular valves; the other, contraction of the auricles, relaxation of the ventricles and closing of the semilunar valves. In the text books the matter is generally described as a mechanical process, equivalent to the working of a well constructed pump. To a certain extent this is undoubtedly true, yet I should consider it quite a mistake if we regarded the movements of the valves as simply produced by the pressure of the blood, in forcing them open, and by the recoil of the same in closing them. This explanation may suffice for the semilunar valves, which are constructed on a principle similar to those of the veins—namely, that they have no muscular appendages, and their closing is brought on by the pressure of the column of blood, which is propelled against the law of gravitation; but it does not appear satisfactory to my mind in the case of the mitral and tricuspid valves. Because these valves have a muscular apparatus, which nature in her wisdom must have intended for some purpose, and which only the law of necessity can have placed there: I mean the papillary muscles. If a muscular action had not been intended for them, nature would most likely have preferred to leave them tendinous throughout. If they were to serve simply, like the

ligaments of joints, to limit the motion to a certain point, no musculi pectinati would have been required in the auricles at all. It is evident to my understanding, that the auriculo-ventricular valves are not simply moved to and fro by the wave of blood that rushes in and recoils, but, to some extent at least, by the contraction of the papillary muscles. If the auricle of the heart of an animal, immediately after its death, is opened so as to get a view of the cavity of the ventricle, and some liquid is poured in, the mitral valve closes long before the ventricle is full. I have seen lecturers making this experiment, but instead of explaining it in the above manner, which logic should suggest, persisted in the statement that the blood, by its own action exclusively, closes the valve. The movements of the heart are more complicated, and nature, for that reason, thought it expedient to provide nervous ganglia within its own substance, so as to have the force of impulse sufficiently close at hand. In fact, the heart, although under control of the pneumogastric and great sympathetic nerves, attends to its vascular and nervous provinces to a certain extent by its own authority. The German physiologist, Bruecke, appreciating this fact, has given it the name "the self-steering apparatus of the heart." The frog's heart exhibits this independence for a long time after its removal from the body of the animal, and when thus all connection with the brain and spinal marrow has been severed; for it continues to beat as regularly as if it still pulsated within the bosom of its luckless owner, who was so unfortunate as to belong to a race which is sought and sacrificed by the zealous men of science. It is well known that the size of the valves makes the difference in the sounds of the heart. A large drum yields a heavier sound than a small one, and consequent-

ly the first or mitral sound is described by Austin Flint, Sr. as "longer, louder, lower and booming," while that of the semilunares is spoken of by the same high authority as "shorter, higher in pitch and clicking." Now it is easily understood that in myocarditis—not complicated with endocarditis or atheroma of the two main arteries—the semilunar valves may and ought to remain fully competent for their part of the work. The same should be the case with the mitrals, if only the walls of the ventricles had undergone fatty degeneration, and if only the recoil of the blood was required to close them. Matters assume a different shape, however, if the papillary muscles have suffered fatty degeneration: the power which is essential for the regular operating of the valves is then wanting, and their closing becomes irregular as well as imperfect. The post mortem examination showed in the cases, which I had the opportunity to witness, this morbid phenomenon in the highest degree—the microscope revealing the complete destruction of the sarcous elements of Bowman, and the sarcolemma tubes filled with a serous liquid, in which fine fat granules were suspended. Of course, the heart was invariably dilated, because the walls of the ventricles principally were likewise so affected, although not to the extent of the papillary muscles. Under the circumstances mentioned, the mitral valves were completely at the mercy of the waves of blood, rushing in and weakly recoiling, flapping them to and fro, closing them only at uncertain intervals, and failing to do so still oftener. This is the interpretation I venture to offer for the symptom to which I have called attention: *the absence of the first sound, its return from time to time, its disappearance again, and all this combined with an almost imperceptible pulse.*

It is a well known fact, which is confirmed daily by the post mortem examinations of hospitals, chiefly in large cities, that

such diseases as typhus, typhoid, scarlet and yellow fevers produce fatty degeneration of the heart. This may be viewed as a pathological process of a more passive order, not tending towards the destruction of the organ, but rather inclining to remain only partial and limited. Many authors attribute it to the high temperature of the blood and the increased activity of the heart in these violent fevers, which is quite probable. The weak pulse, which is found during convalescence from typhoid fever, and which continues for months, after the disease proper has terminated its course, is very likely consequent upon the partial atrophy of the muscular elements of the heart. During convalescence this loss is gradually compensated by a regeneration of muscular fibre, according to the type of physiological growth, which can be observed as well in the striped as unstriped muscles. Although the anatomical proofs of the above theory can not be exhibited in the living body, I think this hypothesis equal to a logical sequence.

But, while the above mentioned diseases do not seem to tend towards prosecuting the process to the destruction of the heart, it is different in the case of rheumatism. We may consider the parenchymatous myocarditis as the legitimate offspring of that disorder, and we have to keep this fact in view when the question of treatment presents itself to us. Its course is rarely a rapid one. Many months may pass, during which time the dilatation of the ventricles and the thinning of the walls are progressing all the time; the pulse may have become so weak as to let us suspect its cessation every hour, and yet the feeble current of life be creeping along. Generally the patient then meets a sudden death, as if struck by lightning, the "cardiac aneurism," as it is usually termed, having given away. The pathological anatomist may well be pardoned when he finds

the walls of the heart reduced to the thickness of the leather of a kid glove, and the whole organ soft, pulpy and flabby, to exclaim, "How was it possible that the person lived this long, and that the catastrophe did not take place sooner?" There can hardly be any doubt but that the fatal end is delayed to some extent by the lungs embracing the heart, and, by virtue of their elasticity, forming a soft pad around it, supporting and thus relieving it of the pressure from the blood within it, which its (fatty) degenerated tissues could otherwise not resist. Only a very small portion of the heart leans against the walls of the chest and is not covered by the lungs. Where so little muscular action of the heart is possible, stagnation in the course of the venous circulation must inevitably ensue, beginning with that of the lungs, their veins having no valves. Oedema and hæmorrhages of that organ are, for that reason, to be apprehended, and, equally so, intercurrent diseases of the kidneys, liver, etc., which may hasten the unfavorable termination.

As to the treatment, I regret to say, that, by the time myocarditis can be diagnosticated, in the manner above referred to, it is too late to entertain much hope of success; yet we may feel justified in not abandoning all hope, if we consider that the fatty degeneration of the heart, concomitant of other diseases, may stop and be superseded by active development of new muscular fibre. But, even though nothing more should be attained than a prolongation of life, it would be as brilliant an achievement as the most sanguine practitioner could desire. The disease being of the closest relationship with rheumatism, I should consider the treatment of the chronic stage of this disorder as particularly adapted. The greatest benefit may be expected from a sojourn in a mild climate, principally during the

winter months, the shore of the gulf of Mexico having, in this respect, scarcely a superior on the eastern part of this continent. In order to compensate for the imperfect arterialization of the blood, consequent upon its stagnation in the lungs, I should recommend the inhalation of compressed air, according to Waldenburg's method. The galvanic current of Faraday might prove a valuable auxiliary on account of its well established efficiency to absorb exudations and to act as a tonic to muscular fibre. It should be applied alternately to the spaces between the cartilages of the second and third, and fifth and sixth ribs, and below the inner angle of the ala of the left scapula. Besides these, the utility of the use of alkaline and ferruginous waters, such as Vichy and Pyrmont, seems obvious; and above all, quiet and rest, physically and mentally. It is to be regretted that structural diseases of the heart generally, by the time they are discovered, have already done too much damage, and have wrought too serious changes to admit of a perfect restitution to its integrity. All of us would rejoice if a remedy, such as quinine has proved itself in intermittent fevers, could be discovered for the restoration of insufficient valves, stenosed orifices, or the degenerated muscular parts which compose that important organ. The steady, onward course of science justifies the hope that the earnest and unceasing efforts of all the associates in the work of medical science, will, at no distant day, dazzle the world and send a thrill of joy through our hearts by new discoveries which will serve to promote and secure the health, happiness and longevity of the human race; to elevate and exalt still further our noble profession, and to reflect all the lustre upon it, to which its high mission justly entitles it.

A CASE OF ESSENTIAL PARALYSIS ACCOMPANIED BY APHASIA.

OBSERVED BY B. E. HADRA, M. D.

On October 9th, 1876, I was sent for by a Swede, living at a distance of six miles from the city of Austin, to attend his daughter (Selma Smith), one and a half years old. The child enjoyed perfectly good health until October 8th, when she seemed to be somewhat indisposed. On the next day she had slight convulsions which had entirely disappeared, however, on my arrival there, and all I could observe at the time was a certain depression. I must admit that it did not occur to me to examine the child as to paralysis, though it would have been but natural to infer such. The following day both parents, together with the child, called at my office to inform me that the lower extremities had been seized with paralysis, and *furthermore that the child had lost her speech, which had been developing quite perceptibly.* Bladder and bowels were in good order. The statement made by the parents was fully verified on examination. Desirable as it would have been, all further observation of the case was prevented, owing to the indigence of the parents, who could not do anything else but now and then report her condition to me, and I have no reason to doubt their veracity. Accordingly, symptoms of recovery gradually became manifest; paralysis slowly disappeared, and the power

of speech returned in the same proportion. At first she uttered a few inarticulate sounds, then single words and so on. Towards the middle of February, 1877, the child was considered restored. The treatment consisted in small doses of strychnine, to the healing power of which I am far from attributing undue importance in this case.

This history, imperfect though it be as to its more minute features, justifies, nevertheless, with absolute certainty the diagnosis of "essential paralysis."* The suddennesss of its appearance in a sound and able-bodied child, the convulsions, the non-participation of both bladder and bowels, and finally the comparatively speedy restitution, scarcely admit of any other interpretation.

This case, like so many thousands of others, would not invite more than an ordinary interest were it not for the fact of aphasia having been a close concomitant. This symptom, which clearly enough cannot be considered as anything else but a cerebral affection, deserves the highest consideration, because it involves the decision of the question as to where to lodge the pathological seat of the so-called essential paralysis. As is well known, a large number of authors have declared in favor of the spinal cord as being the starting point of this form of paralysis; for which reason the term "spinal paralysis" has been very generally accepted. Others maintain that the pathological change originates in the peripheric nerves, and still others are inclined to consider both brain and spinal

*The synonyms of this disease are:
Atrophy infantile paral., (Meigs and Pepper.)
Paral. infant. spinalis, (Heine.)
Essential parala., (Rilliet, Barthez, Niemeyer, etc.)
Fatty atrophy par., (Duchenne.)
Par. during dentition, (Gall.)
Organic infant. par., (Hammond.)

cord as being affected. So I may classify the following authors:

1. Declared in favor of spinal origin: Heine* (*a*), Damaschino and Roger (*b*), Hammond (*c*), Meyer, Bristowe (*d*), etc.

2. Declared in favor of peripheric origin: Vogel (*e*), Duchenne and Bouchut (*f*), Zenker, Buhl, Heyem, etc.

3. Bamberger declares the sympathetic ganglia are the chief seat of the changes.

4. Not excluding the brain are: Niemeyer (*g*), Volkmann (*h*), West (*i*), Lewis Smith (*j*), Sinkler (*k*), Friedreich, etc.

(This classification, which does not at all claim to be exhaustive, will serve to illustrate the indecisiveness of this question.)

Now, if cases like the one above reported could be proved beyond a doubt, the position of those who also consider the brain affected would be fortified not a little. I was not able to find on record many cases of "essential paralysis" where the brain was as obviously included as in ours. Charcot (*m*) speaks of one case of infantile paralysis attended by aphasia, which, however, admits of doubts. Volkmann (*n*) speaks of a case with atrophy of one side of the face. West mentions similar facts. But if we were disposed to consider these cases

*(*a*.) Spinale kinderlaehmung, etc.
(*b*.) Gaz. med. de Paris, 1871.
(*c*.) Electricity by Meyer, translated, etc., by Hammond.
(*d*.) Theory and Practice of Medicine.
(*e*.) Diseases of children.
(*f*.) Diseases of children.
(*g*.) Text book.
(*h*.) Collection of clinical lectures No. 1.
(*i*.) Diseases of children.
(*j*.) Treatise on diseases of infancy.
(*k*.) American Journ., 1875.
(*l*.) Quoted from Monthly Abstract, 1877.
(*m*.) Gaz. med. de Paris, 1870.
(*n*.) Collection of clinical lectures.

of pure infantile paralysis as being identical with those that set in after exanthematic diseases, we could adduce increased proofs of a real participation of the brain. In such cases, after scarlatina, measels, typhus, etc., we will frequently meet with a complication of symptoms that will admit of no other interpretation. So directly touching aphasia there are two cases reported in the *Obstetrical Journal* of Great Britain, by Finlayson,* one in connection with scarlatinal dropsy, the other with pertussis.

It cannot be my intention on this occasion to theorize at any length in what way the brain might become affected in these pure cases of "essential paralysis," but it seems to me that the symptoms all point to an embolic process. The extreme suddenness emphatically indicates such occurrence. And indeed it is proven by Eulenburg, Griesinger, Jacobs, Chvostek and others, that aphasia was produced by embolism of the arteriæ fossæ Silvii. So, if we should try to explain the coincidence of the aphasia with the paralysis in the above related case, we would have to suppose synchronous emboli into some vessels of the brain and into some of the spinal cord.

*No. XLII, Sep. 1876.

TYPHO-MALARIAL FEVER.

PECULIAR BRAIN AFFECTIONS AS SEQUEL IN TWO CASES.

OBSERVED BY J. C. B. RENFRO, M. D.

CASE I.—S. R., girl, without hereditary taint, aged seven years, was attacked with typho-malarial fever about December 1st, 1875. The disease ran the usual course for the first twenty-one days, easily controlled by remedies. The maximum temperature during the period was 101.5° Fah.

About this time paroxysms of pain in the head (temporal region) set in, with considerable irritation of the spinal cord. This was followed by dilatation of both pupils, and an intermitting pulse. All the usual remedies were tried, but with only temporary relief. The tincture of Gelseminum seemed to answer best, though its effects were not lasting. Pain was most severe during the last half of day. Temperature was never more than 101° Fah. This state of things lasted for four months, when all the symptoms became aggravated—occasional convulsions, slight strabismus and flushed cheeks; vision became obscure, and the pupils did not readily respond to light. The little sufferer finally became a most pitiable object, for total blindness ensued; pain in the head became so severe that she would bury her face in the pillows, or spring up and scream out in excruciating agony, "Oh, my head!

my head!" The appetite was variable throughout the course of the disease. At one time she relished food; at another time she loathed it. She died very quietly on May 30th, 1876.

CASE II.—John W., aged eight years, was taken sick December 8th, 1875. Diagnosis, typho-malarial fever. The disease ran a course similar to ordinary cases of this fever, and seemed to be controlled by the usual remedies. The temperature never rose above 103° to 104° Fah. On the sixteenth day of the sickness there was an intermitting pulse, with severe pain in the anterior part of the head, which became worse in the evening of each day. Dilatation of both pupils, left more than the right. At this time there was a decline of the temperature to 98° or 99° Fah. The patient seemed to be convalescing, except the severe pain in the head. Very little, beyond temporary, relief from medicines. On the 21st day after the attack, the patient became much worse; seemed to be almost moribund when I reached him; pulse 140 and thready; respiration sighing; extremities cold. Proper remedies brought about a slight reaction in the course of a few hours, though the condition was still alarming, and remained so for about twenty-four hours, when violent spasms set in, lasting for thirty hours. These were controlled by chloral hydrate. The patient remained in this condition until December 30th. While I was clipping the hair close to the scalp in order to more readily use cold applications, I discovered a large soft tumor occupying nearly the entire anterior half of the left parietal region. The left eye was almost forced from its socket by the pressure from behind. I thought there might be a communication between this external and an internal effusion. To test this, I placed one hand over the tumor, and made gentle pressure, while the fingers of the other hand were kept on

the pulse would almost cease
removed, it was intermitting and
termined to make an incision into
contents. I did so, with considera-
at. The pulse rose fifteen beats to the
minutes; became full and regular. The
disappeared. There was about one teacup-
looking fluid discharged from the tumor. The
more diffused until it covered the entire left
ion. The next day another incision through the
still further relief, discharging about the same quan-
effused serum. On the third day after the first in-
a I made still another, near the crown of the head, which
scharged a still greater quantity, and with much relief to the patient. Pulse became regular; appetite returned and sleep was less disturbed. For three weeks, from this time, the tumor discharged freely through the incision. Improvement in the patient's condition was gradual. The various organs resumed their functions except the right side, which was almost entirely paralyzed, and there was a loss of vision in the left eye. I used, as local application to the tumor, solution of potass. iodid., with a small portion of Lugol's solution. Internally I gave potass. iodid., ferruginous tonics, bark and nux vomica. Patient improved gradually. During the first week of convalescence there was dysuria and occasional priapism. The discharge from scalp continued about six weeks. The incisions then healed, and convalescence became more rapid. I verified the fact that there was a communication through the skull, by use of the probe; for I found the opening in the longitudinal suture near its anterior extremity. The probe entered one and a half inch perpendicularly. There is now a small

depression over the site of this opening. The pupil of the lost eye is largely dilated and stationary. The hemiplegia is only partial, and there is slight impairment of the intellect, but he is still able to go on errands, and attend to simple commissions.

A CASE OF STONE IN THE BLADDER.

REPORTED BY J. J. BURROUGHS, M. D.

[OBSERVED BY PATIENT IN HIS OWN CASE.]

During the month of August, 1867, I was attacked with cholera. Upon my recovery from its immediate effect I was left with a most annoying pain about the region of the kidneys, which continued, with greater or less intensity, most of the time until October, 1868, when a calculus passed from the kidneys to the bladder. I was at the time in New Orleans, and first called Dr. Wood, who happened to be convenient, and subsequently Dr. D. Warren Brickell. Two or three days after the passage of the calculus, I furnished Dr. Brickell with a sample of my urine, who, upon an analysis of it, said that I was suffering with calculous formation in the kidneys. He, having been undecided as to the cause of the intense pain I was suffering, put me upon alkalies, and for six or eight months I enjoyed comparative immunity from the pain in the back or kidneys, with which I had previously suffered. At the expiration of this time I began again to suffer, and his remedies failing to afford relief any longer, I sought other physicians, who could give me nothing more than temporary relief. Up to the spring of 1871 I continued, from time to time, passing calculi from the kidneys. At this stage a calculus passed while on a trip up the Ouachita river on a steamboat, and hav-

ing attracted the notice of a gentleman named Hill—a passenger—I was advised by him to try a remedy which he said had relieved him of a similar affection some twelve years prior to that time. This remedy I did try with the most happy effect, for after having persisted in the use of it for some time, I began to discharge quantities of what had the appearance of sand, and particles from the size of a small garden pea, decreasing to the size of a pin's head. Nine months after this—up to November, 1871—I experienced neither pang nor pain, and felt entirely comfortable and natural. In November, 1871, another calculus passed, and I continued to be annoyed from time to time until April, 1874, notwithstanding I resorted to the use of the remedy above mentioned twice during that time. I will mention that the effect of this remedy upon both occasions resulted in producing what was said by Dr. D. G. Durr, of New Orleans, whom I had called, to be hemorrhage of the kidneys. This remedy is a weed which grows to the height of from five to six feet; leaves, shape of the peach leaf, appear upon it at intervals of six or eight inches between groups, one on each side of the stalk, and at the top there are several limbs or branches that bear a white, soft and fuzzy flower. It is called in Arkansas "gravel root." I have found the same weed here, where it is known as "resin root weed." The root I put in whisky, and took a tablespoonful three times a day.

The 1st September, 1872, still passing calculi occasionally, I had the most painful, scalding, burning sensation upon the passage of urine, and applied to Dr. Durr for relief, who, without instituting an examination, pronounced it cystitis, and put me upon alkalies. This treatment he continued, not persistently, however, for he saw me only occasionally until the next August, 1873; calculi still continuing to

pass from the kidneys to the bladder in the interim. August 27th, 1873, I was attacked with pernicious fever, and upon the subsidence of the fever, at the expiration of five days, I was left completely prostrated, physically, with my whole urinary system in a worse state than ever. Dr. Durr was unable to reach my bladder with a catheter, in consequence of the inflamed and enlarged state of the prostate gland, and used an injection of nitrite of silver to correct the inflammation, after which he reached the bladder and persistently injected it, using many different agents, among which I can name tannic acid, carbolic acid, chloride of sodium, sulphate of zinc, acetate of lead, besides morphine and mucilaginous waters. Could find no stone upon examination. Dr. Durr falling sick, Dr. A. M. Brickham took charge in his stead. He also sounded me and examined me most closely for stone. None found by him. Continued the injections and put me upon belladonna, to alleviate the intense pain about the bladder, and with success. Dr. Durr recovering, resumed charge of the case, and continued to treat me. Dr. Jones, professor of chemistry in New Orleans, analyzed my urine twice a week for some time, and said the analysis indicated also Bright's disease in its incipiency, and, at his suggestion, to correct the secretion of phosphatic matter, I was put upon a decoction of pareira brava root, which had a most happy effect. Early in November, having been confined to my room for over two months, I had been so far restored to health and comfortable feeling that I was enabled to engage in active business, and continued so engaged about three months, without much trouble, when I again began to suffer, and by May, 1874, I became confined to my room. An examination was then made, when a stone was found. Dr. Warren Stone, jr., Dr.

Durr and Dr. Mandeville making the examination. On the 11th of July, 1874, I was operated upon; Dr. Durr using the knife, Dr. Stone, jr., holding the staff, while were present aiding and assisting Drs. S. Logan, professor of surgery, Mandeville and others. The stone crumbled beneath the forceps, and, although great efforts were made to remove all particles, many of them were left in the bladder. For ten days and nights following the operation, particles continued to pass through both the urethra and the incision, producing the most intense and agonizing pain. Finally the incision so far healed as to prevent the further escape of particles, and one or more were caught in the bladder. On the fifteenth day after the operation the urine ceased to escape through the incision, but the latter did not heal externally (suppurating excessively in the meantime) until the twenty-first day. The particle or particles left in my bladder were plainly felt whenever the catheter was introduced. Two and a half months after the operation Dr. Stone attempted to crush the particles in the bladder with a lithrotrite, but failed, although the pieces could be felt. I continued to be annoyed, and about March 7th was almost incapacitated for locomotion, and so pained in my bladder by the particles that my suffering was ten-fold more than at any previous time. Having at last become weakened and emaciated to that extent that I was unable to get upon my feet, and prostrated in bed, I was placed upon a bed in a hack and hauled to Houston, eighty miles, where I arrived on Monday, August 16th. I was again operated upon on the 21st of August by Dr. J. J. Burroughs, aided and assisted by Dr. B. Powell, when two stones were found, one of which being quite soft, crumbled beneath the forceps. I was under the influence of chloroform two and a half hours, giving them

ample time to thoroughly explore and relieve the bladder. At last, I have reason to promise myself immunity from pain. Having been operated upon on Saturday, the 21st, the urine ceased to discharge itself in any volume through the incision. During Monday night, the 23rd, and by the 25th, not a drop escaped, the incision having well nigh healed, as well as having united. Friday, the 27th, being entirely free from anything like soreness or pain, and feeling almost natural, I got out of bed and walked around the room with ease and comfort.

I will state that I removed from New Orleans to Houston, Texas, in October, 1874.

A CASE OF VASCULAR TUMOR.

Observed by S. F. STARLEY, M. D.

In June, 1873, I was called to see Miss K——, aged thirty years, of seemingly good constitution and rather stout physique. On the day preceding the one upon which I saw her, she had a sudden and alarming hemorrhage from a tumor which was situated about the centre of the right hypochondriac region. This tumor was about the size and shape of an average cocoanut, and was attached by a broad base. It seemed to be composed almost entirely of blood vessels and loose connective tissue. The integumental covering was exceedingly thin, and through it numerous blood vessels could be seen ramifying in every direction, and it was from the rupture of one of these that the hemorrhage resulted. On the morning of the day upon which I made my first visit, the hemorrhage had been renewed, and by the time I saw her she was so prostrated from the loss of blood that it seemed doubtful whether she could rally. The hemorrhage, which was still going on, was checked by the application of per sulph. ferri, and a bandage, which was so applied as to make pressure upon the bleeding point, fortunately at the apex of the tumor,and so situated that the pressure of the bandage could be brought to bear upon the ruptured vessel. This much done, and proper restoratives administered, I returned to town

(patient resided four miles from town), and had a blacksmith to make a needle six inches in length and slightly curved near the point. The eyelet was sufficiently large to admit a common twine, such as saddlers use. Armed with this needle and six yards of twine, I returned to my patient, accompanied by Drs. W. N. Sneed, T. S. McIlveen, R. Adams and the late Dr. W. G. McInnis. The operation was performed as follows: The patient was brought under the influence of chloroform, and the needle armed with the twine so as to form a double ligature, one cord of which was blackened with ink, and the other half left uncolored. After the plan of Erichsen I proceeded to pass the needle through the base of the tumor, just at its inferior border, having slightly compressed its base so as to elongate it from above downwards. The double ligature was drawn through so that eight or ten inches of it was left hanging out. The needle was again passed through from the opposite side of the tumor, and one inch higher up, and another loop of the ligature left as before, and thus the needle was passed through the base of the tumor from side to side, and at intervals of about one inch each time, leaving a sufficient loop of the ligature, until the entire base of the tumor was traversed on a straight line from below, upwards. The blackened cords of the ligature were now all cut on one side, and those left uncolored were tightly drawn and tied on both sides, so as to completely strangulate the tumor. A hypodermic dose of morphine was given, and the patient allowed to recover from the effects of the chloroform. The next day the whole tumor (which was perfectly dead and somewhat shrunken) was covered with lint, saturated with a tolerably strong solution of carbolic acid, and this was kept constantly applied until the whole sloughed off and was separated from the parts beneath.

This was accomplished on the third day after the operation. After the separation of the tumor the skin retracted from the edges of the wound, leaving a large granulating surface, which, however, healed in a few weeks, and a large and rather ugly cicatrix occupied the site of the former troublesome and dangerous tumor. The patient informed me that this tumor had first attracted her attention some fourteen years before, when it was not larger than a pea, and that its growth had been steady up to the time of the occurrence of the hemorrhage above related. The mass was so much decayed at the time of its separation that no satisfactory examination could be made of it. From the time of the operation there was not a drop of blood lost, and to this circumstance the patient was evidently indebted for her recovery, as the previous hemorrhage had reduced her to the greatest extreme of anæmia compatible with the continuance of life.

CEREBRAL INJURY.

Observed By A. R. KILPATRICK, M. D.

Miss I. B., aged sixteen years, blonde, of general good health, on the twenty-fourth of August, 1874, while riding rapidly, was thrown from the horse against a tree, and was dragged by the foot, which became entangled in the stirrup, fully one hundred yards, her head and shoulders touching the ground; does not know that she struck a stump. She was stunned and partially unconscious for a while, although the external evidences of injury were very slight. There was partial strabismus, marked hyperæsthesia about the face, head and neck, so that a light puff of air, or a light use of a fan, caused pain and slight tetanic symptoms or twitchings. Pain at the distal end of the radius and ulna, and involuntary contractions of the flexors of the arms and hands, all of which lasted four days. Eight days after the injury I saw her, when she still suffered pain in the left wrist and lower end of the fore-arm; tenderness on pressure on the nucha, cervical vertebræ, and left mastoid region. The peculiar painful or tetanic symptoms caused by fanning, or a puff of air, or the lightest touch, ceased on the fourth day. The catamenia were present when injured, and had been suppressed by using cold water dressings on injured parts, the arm, shoulders and spine.

The principal symptom when seen, and the one most interesting to me, was the eyesight. At a distance of six feet, and any distance beyond that, vision double; less than six feet, vision natural, except that when the face is elevated, or the chin raised nearly horizontal, then vision is double and very indistinct, but by depressing the chin near to, or upon the sternum, and looking forward, then vision is perfect. Another peculiarity is, that the greatest injury was sustained on the left side of the head, and still the left eye is the most deranged, or disordered, because, when both eyes are open, vision was impaired, and by closing the left eye vision was good in the right eye. There was no conjunctivitis, no photophobia; pupils natural. Examination by the ophthalmoscope showed the retinæ and lenses in a healthy condition. A question arises as to what could produce the condition of the visual abnormity of the left eye? Was it the effect of contre-coup? At my first visit her mother said that she had detected slight momentary, or ephemeral, strabismus, but so slight and evanescent that she was not certain there was any present. I saw none.

By the use of cups to nucha, and blisters kept running some time, and the administration of iodide of potassium, with bichloride of mercury, all the symptoms gradually disappeared.

CONSERVATIVE SURGERY.

REPORTED BY J. W. FENNELL, M. D., AND J. M. McKNIGHT, M. D.

We were telegraphed for on the night of the 24th of December last to attend the wounded from a railroad accident five miles west of the Guadalupe river. Found one man, Henry Miller, aged twenty years, terribly mutilated, but the weather being bitter cold, and the shock very profound, we could only make a superficial examination, stimulate, watch for hemorrhage and for daylight. On Christmas morning, found our patient had rallied pretty well, so we proceeded to the examination, and found the left arm completly crushed at the elbow, and laid open for several inches, with the ends of all the bones mashed. Found also a compound fracture of the left tibia, a little below its middle, with great laceration of the soft parts. Injury seemed to have been done by a bolt driven through the leg, there being open wounds on either side. There was also a compound fracture of the metatarsal bone of the left great toe. The case seemed almost hopeless. The arm, of course, had to come off immediately, and with the kind assistance of Drs. Crawford and Graves we amputated as low down as possible. Notwithstanding the deplorable condition of the leg, we decided to make an attempt to save it, and if it failed we would fall back on our folorn hope—secondary amputation. The fractures were reduced, and the leg

placed on a double-inclined-plane splint. The after treatment consisted in the free use of opiates, moderate stimulation, and good nourishment, with local use of carbolic acid and water dressing thoroughly carried out. On the fifth day his temperature rose very high, with pulse 140. Gave verat. viride, and as soon as the fever declined, large doses of quinine, after which we had no trouble with constitutional symptoms. The local inflammation was intense, and suppuration very extensive, abscesses forming in several different places, which had to be opened; but under quinine, iron, cod liver oil and rich diet—with application of a stiff starch bandage—the patient rallied and has made a good recovery. Owing to the fact of his left arm being off, he has not been able to use crutches and get about as well as he otherwise would have done.

A CASE OF PHLEGMONOUS ERYSIPELAS.

Observed by W. A. ARCHER, M. D.

September 6th, 1876.—Called to see Louis Harbrecht. Found him as follows: From the angle of inferior maxillary bone, on each side, and from the top of the sternum to the chin, the whole space dusky red; pits on pressure, but hard, shining and tense from swelling; considerably but not excessively sensitive. Says this swelling commenced three or four days before, and had been increasing ever since. Now swallowing and speaking interfered with by the pressure. Cicatrices show that there had been abscesses in this region before, though he says they were not very extensive. Diagnosis—phlegmonous erysipelas. Prognosis very grave, because suppuration is inevitable, and the waste will be enormous; liability to pyæmia or septicæmia; contingency of abscess breaking into the trachea through ulceration and sloughing process; danger of suffocation from pressure on trachea, and prostration from inanition due to pressure on œsophagus; extension of inflammatory action. Ulcerative process may attack important blood vessels. Indications for treatment: preserve the strength as much as possible; circumscribe inflammation; hasten suppuration, and as soon as fluctuation can be detected evacuate the abscess.

Prescribed ol. ricini, ʒvj. Then ferri. tinct. mur. with quin. sulph., dissolved by aid of elix. vit. in aquæ cinnam., every three hours, in dose of twenty-five drops of the tinct., and iv gr. of the quinine. Beef tea and soft boiled eggs as much as he can take. Warm mush poultices to the part. September 27th.—Rested well last night; no fluctuation; doughy feeling more marked; sensibility rather less; dyspnoea and dysphagia somewhat increased. Continued above treatment. The quinine and iron every two or three hours. 28th.—About same except some increase of swelling, but no suppuration. Continued treatment. Ordered poultices to be renewed, very warm, every hour or two. As there seemed some advancing tendency to that part of the inflammation which was superficial, directed it to be circumscribed, if possible, with tinct. iodin., freely applied. 29th.—Added to treatment brandy in form of egg-nogg and toddy. Press the quinine and iron, also the beef tea, as the system shows signs of exhaustion. Urge the suppuration with the poultices hot as can be borne. Swallowing very difficult. No sleep last night. Gave chloral hydrat. et potass. brom. during the night to secure some sleep. 30th.—Carried Dr. Powell with me in the morning, and Dr. W. H. Howard in the evening. All the bad symptoms increased, still no suppuration which can be discovered, but the iodine seems to have stopped the advance of any superficial inflammation. Slept well last night, and is much more cheerful. Press the treatment, especially renew the hot poultices as often as they cool. October 1st.—Dr. Powell visited twice with me to-day. Evening.—Can faintly detect fluctuation, but very deep. Defer opening abscess until morning. Ordered treatment continued. Just as we were leaving the house I was coolly dismissed from the case. After suppér a messenger

begged me to return in the morning and bring Dr. Powell also. Explained that a practitioner of this city had been there during the day and said he could cure the case without the knife, by blistering the sides of the neck on the edge of the inflamed part. After some parley I consented to go back in the morning if Dr. Powell would go with me. October 2nd.—Found pus. Dr. Powell introduced the knife, and at once there was a rush of gas, horribly fœtid, followed by a watery, sanious fluid, very offensive—quantity not near as much at first as expected. Before we came he had hawked and spat out several mouthfuls of pus, and also some lumps of flesh, apparently, as large as the end of my finger. Press the quinine and iron, and beef tea and egg-nog. October 3rd.—Find emphysema extending downward on the chest. Air crackles audibly under the finger. Carried Dr. Burroughs to see the case in the evening. No change in the treatment. Used Labaraque's solution, sprinkled over the poultices and around the room and bed since yesterday. Strength failing perceptibly. Discharge enormous, of a thin, sanious, purulent fluid, as offensive as ever. Has been much more comfortable since the opening was made, and can swallow, which he has not done for thirty-six hours before. (Should have mentioned above that everything was given by enema during that time.)

The whole of the skin over the inflamed space purplish and more dusky than ever—seemed almost dead. October 4th.—Dr. Powell and I again made another cut just to the left of the median line, and below the other cut, from which issued much more of the same kind of discharge, which could not escape through the opening above, the latter being just to the left of the median line, and even with the larynx. He is sinking from the heavy drain, and cannot live. Died at one

o'clock, P.M., from exhaustion, the discharge having been continuous since the opening was made, and aggregating an enormous amount. His age was about twenty-seven years. Previous to his sickness was a hale and hearty man, apparently—especially active as a foreman at fires—working daily, and lately driving a street car. He ascribed his disease to getting wet and remaining in his car in that condition a considerable time, a short while previous to the commencement of his sickness. Said he suffered severely at that time from the cold and wet.

A CASE OF CONGENITAL UMBILICAL HERNIA:

OBSERVED BY W. W. LUNN, M. D.

[REPORTED BY J. C. B. RENFRO, M. D.]

I was called to see Mrs. F. M., January 3rd, 1876, and found her in labor with her seventh child. She was soon delivered of a boy weighing ten and a half pounds, and apparently perfect in every respect save in the umbilical region, where there was an open space immediately below, and connecting with, the umbilicus, and through which protruded some two or three inches of intestine. The cord was much dilated; the umbilical arteries and veins separated from each other by the pressure of the intestines from within. Into this dilated cord the intestines forced their way, at least one inch and a half. The bowels were easily replaced into the cavity, but would immediately protrude again until prevented by a few sutures. The intestines were only covered by omentum and peritoneum. The opening in the abdomen extended through the abdominal wall. There was no laceration, but simply a failure of nature to close the parts. This opening has now closed, with the exception of a small orifice, supposed to be the end of the urachus, through which the urine occasionally passes.

UTERINE FIBROMA.

Observed by W. J. BURT, M. D.

On the 10th of September, 1875, I visited Miss H., who came from a distant county for treatment. She was thirty-seven years of age, of spare make, but had been well developed and of a vigorous and determined will. She inherited no constitutional vice; her ancestors were healthy, and no relative, so far as she knew, was subject to tumors, except one brother, who had a large tumor on his neck, said to be fibrous. During her youth she was noted for energy, activity, and a finely developed physique. She menstruated at fifteen, and this function continued normal until 1870. At this time she began suffering considerable pain, and noticed her menses lasted for seven or eight days, and very free; and soon she discovered her abdomen was too large, and she felt a tumor, as believed, projecting above the symphisis pubis.

During the five years previous to my visit she had been under the care of several physicians, but found no relief. The floodings from month to month grew worse, and the tumor constantly increased in size, and becoming alarmed, she came to Austin for treatment.

I found her health much impaired. She was anæmic, anxious and emaciated, with a hectic flush and constipated bowels; pulse 110, small and corded; respiration 26. She was very

weak, and hardly able to walk a hundred yards, and every motion causing pain and distress; sleepless nights and dreadful forebodings; her catamenia never entirely absent more than five or six days.

An examination over the abdomen revealed a large tumor reaching to the umbilicus, and more to the left side, and apparently about the size of a child's head. The tumor was uneven and lobulated, and appeared fixed, or almost so, in its place. The measurement around the body, and over the most prominent part of the tumor, was thirty-eight and a half inches. An examination by touch and speculum revealed a tumor filling up the pelvic cavity, and impacted in it, with the uterus forced down, and the *os uteri* behind the symphisis pubis. The vagina was about three inches long, caused by the tumor and *fundus uteri* displacing and filling a part of its normal locality. It was with difficulty a probe could be introduced into the cavity of the uterus, which, when done, showed the cavity about three and a half inches long, and running directly backwards. The tumor above and in the pelvis and the uterus were so intimately and thoroughly united that they seemed one body, and any motion made of one moved the other. I diagnosed this an extra uterine fibroid tumor, and more closely attached to the anterior wall.

With these facts before me, what must I do? That the tumor must either be removed by an operation or reduced in size by treatment was clearly evident, if my patient found relief. To remove such a tumor, so closely connected with the uterus, in a patient failing in health, was, to my mind, out of the question. But then could the second proposition be accomplished —the tumor reduced and menorrhagia controlled? Nothing among the alteratives or deobstruents offered that hope.

Having recently read an article on the use and success of ergotine in these troubles, by Mr. Hildebrandt, and having no confidence in any other treatment, I at once adopted his suggestions, and vigorously prosecuted the treatment as advised by him. On the 12th of September I made the first hypodermic injection of three grains of Bonjean's ergotine, dissolved in one drachm of water and glycerine (equal parts), into the abdominal wall, over the most prominent part of the tumor. This I repeated once a day for twelve days, much to her relief. I suspended the injection for sixteen days, during her menstrual period. In October I made twenty injections of five grains each in the same amount of fluid, into different parts of the abdominal wall, over and around the tumor. There was an interval of twenty days between the periods, the longest time for four years.

The loss of blood was not one half the amount it had been previously; the tumor was softened and much reduced in size, and her general health and strength were greatly improved. During the months of November, December and January I continued the daily hypodermic use of five grain doses of ergotine between each catamenial period, until the tissues over and around the tumor were so saturated with the preparation, that the ergotine would flow from a punctured point.

I had now used about three hundred grains of ergotine; the menses were almost normal in time and amount; the tumor was reduced to at least half the size it was before treatment; she suffered but little pain, and was able to walk half a mile when she desired. During the last days of February, 1876, and through March, and to the 10th of April, I used about one hundred grains more of the ergotine. Her general health had steadily improved, and she felt now, after seven months

treatment, that she would get well, and so returned to her home hopeful and joyous.

She wrote me two months ago that she had constantly improved since leaving Austin. The tumor was much smaller, she measured now around the body, and over the tumor, thirty-four inches, and said "I feel better than I have for years."

Remarks—What more can we expect from treatment than was accomplished in this extreme case? What higher testimony can we desire to demonstrate the *positive* influence ergotine has over these tumors? This case is but another "cut stone" to hand down to the profession to build a monument to the immortal Hildebrandt. The success in this case does not amount to an entire removal of the fibroid growth, but it does add some comfort to a life that was miserable in the extreme. I recommend and urge this treatment before the profession.

CONGENITAL ABSENCE OF THE UTERUS.

Observed by W. J. BURT, M. D.

I report this case for two reasons. 1st. The rarity of absence of uterus and appendages in otherwise healthy females. 2nd. The mistaken diagnosis made in her case by several physicians.

I called to see this lady on the 12th of March, 1876, and learned that she was twenty years of age, had been married two years but had never menstruated. At the age of sixteen she was placed under the care of a good physician who treated her with so-called emmenagogue powders, pills and mixtures "ad nauseam." Her remark was she "had taken a barrel of medicine," but no treatment had established her catamenia. She was all the time in perfect health, and not conscious of the reason for persistent drugging. About two years ago she was placed under the care of a professed gynecologist, who gave her a thorough and critical examination and discovered that she had "disease of the womb," and to relieve which he cut, probed and dilated for several months, and finally *sagely* informed the lady she was well and could return home. As her menses had never been seen she supposed there was something wrong, and so applied for more advice. I found her health good, and she was in fine spirits. She was well developed and of a beautiful and symmetrical form, and had all the external appearances of a perfectly made woman. She had never menstruated, and, so far as I could learn, had no monthly molimen. Examina-

tion by touch revealed a short vagina, with a stricture at about half the ordinary length. Examination by speculum revealed a small opening in this stricture, and the probe passed through the aperture about one inch. Dividing the stricture at three places, and dilating with sponge tents, I was enabled on the succeeding day to continue my investigation. But to my surprise I found one of Hodge's pessaries above this stricture, and so imbedded in the tissues that it was difficult to remove it. The parts toward the rectum and bladder had sloughed away so much that I feared a recto- and urethro-vaginal fistula. This terrible consequence was prevented, however. I then learned that the gynecologist had placed it there to "*hold up the womb.*" Prosecuting my investigation I found the vagina ended in a cul-de-sac, and that there was no sign of a uterus save two little tubercles about the size of a pea, and no opening of any kind in or around them. This, of course, led me to infer that there was no uterus. So with the left index finger in the rectum and a male catheter in the bladder, with the end turned backwards, I discovered there was no uterus intervening, for the point of my finger and the end of the catheter were almost touching. Again, with catheter as above, and finger in the vagina, forced up against the cul-de-sac, the catheter was easily and clearly felt at different places just above the finger, and the end of the catheter moved easily and freely around this terminal point.

My diagnosis, of course, was that there was neither uterus nor ovarian appendages, and would never be any catamenial flux. A noted gynecologist of a distant city has since confirmed my diagnosis. I told the lady that neither medicine nor surgery could give her any relief, and that it was worse than useless to suffer in body and purse *even* in the hands of a good physician.

WEST AND SOUTH-WEST TEXAS AS A HEALTH RESORT.

By J. B. ROBERTSON, M. D.

The tendency of climatological science in our time is mainly directed to the study of the different constituents of climate in order to ascertain thereby the fitness of special localities to certain diseases.

The present sketch originates in the desire to make a small contribution to this department of science by furnishing a few data concerning a region heretofore unknown in its climatic relations to the greater number of our people.

That portion of West and North-west Texas lying west of the 98th meridian of longitude, and north of the 29th degree of latitude, has an elevation above the sea (beginning at San Antonio, near the southern line indicated) of five hundred feet, and gradually rising, as the line is traced north, to fifteen hundred feet. This region is drained by the following rivers and their numerous tributaries: Brazos, Colorado, Guadalupe, San Antonio, Neuces and Rio Grande, all of which find their outlets into the gulf of Mexico. The rapidly decreasing elevation of the country, through which these streams pass in their course to the sea, secures to the section named the most perfect and thorough drainage. In addition to this fact, this vast area of territory is entirely free from

ponds, marshes, lakes or stagnant bodies of water to disturb with their contaminating effluvia the purity of the atmosphere. Here are also found the principal mountain ranges, of which the Guadalupe is the largest, and has the greatest elevation. These mountains, with their intervening valleys and plains, with their springs of pure and limpid water, which for beauty and picturesqueness are rarely equaled and never surpassed, are beginning to attract the attention of the professional man in search of a locality for the climatic treatment of diseases of the respiratory organs, especially phthisis.

It is a source of much regret that I have not been able to get satisfactory reports of the range of the thermometer and the barometer, with the humidity of the atmosphere. I am able to give only the mean temperature for the seasons and year (means obtained from six years observation at San Antonio) ending with the year 1875, which is, Spring, 69.94°; Summer,85.56°; Autumn,68.95°; Winter,52.94°; fortheyear, 68.85°. The mean average rainfall for the same period was 36.90 inches. For these figures I am indebted to Dr. Fred. Peterson, of San Antonio.

The pressure of vapor, its weight, the absolute humidity, have, as far as I know, never been measured, but the observations of daily life, by all who have lived in any part of this section, or traveled through it, concur in attesting the astonishing rapidity with which the roads dry after a fall of rain, and the perfect preservation of meats for days, hanging in the open air, indicating unmistakably a small amount of moisture suspended in the air.

That eminent English author, Dr. James Henry Bennet, in the second edition of his valuable work on the "Treatment of Pulmonary Consumption by Hygiene, Climate and Medicine,

in its Connection with Modern Doctrines," after demonstrating the error of sending consumptive patients to all the points, both in Europe and America, that have been selected, and are now being used for the climatic treatment of consumption, concludes thus: "We are always, however, at a loss to find a cool summer residence in the States, where the minimum in July and August would be between 50° and 60° Fah., and the maximum between 60° and 70°. I wish, therefore, my American colleagues would try to find out some such locality in their mountain ranges at an accessible distance from New York."

While the range of the thermometer, in the region here treated of, as far as record has been kept, is higher than that indicated by this experienced author, the known dryness of the air, together with the cool and refreshing breeze which is universally prevalent, may more than compensate the consumptive patient for the difference in the range of the thermometer. The beneficial effects of the climate, in the area treated of, is not simply a matter of opinion on the part of the writer on purely theoretical grounds. During a practice of over thirty years in central Texas, he has seen many patients sent there with clearly marked indications of consumption, and at a time in the history of the country when such patients had to rely almost entirely upon the climate for the benefit they received. In all cases the change gave marked relief, with, he believes, a prolongation of life for years with some, and a perfect cure with others.

When this territory shall have been settled and provided with improvements and facilities for the accommodation, care and treatment of consumptives by hygiene and medicine, which will ere long be the case, Dr. Bennet and all other brethren of

our profession, can safely send their patients to this invigorating climate, with the assurance that whatever a favorable climate can do, will be done.

Having retired from the practice, and been otherwise actively engaged for the last four years, I must ask the charity of my brethren of the Convention for this hasty and crudely written paper. If I shall succeed in calling the attention of the active members of the profession to this important subject, and thus procure its investigation, and the promulgation of its merits for the relief of suffering humanity, I shall have accomplished the object desired.

Rain Fall at Wallace Prairie, Grimes County, Texas, from April 1, 1876, *to April* 1, 1877, *in Inches and Decimals.* (*Observed by Gwyn Morrison, Esq., and Reported to the Association by A. R. Kilpatrick, M. D.*)

MONTHS.	DAYS.	INCHES.	MONTHS.	DAYS.	INCHES.
April, 1876	7	.28	November	24	.10
"	12	.55	December.....	23	.41
"	28	.06	"	24	.45
May	14	.22	"	27	.55
"	21	.48	"	30	1.00
"	23	1.40	"	31	.18
"	26	.80	January, 1877 ...	13	.08
"	27	.06	"	14	.07 [Sleet]
"	28	.51	"	15	.10
"	29	.55	"	16	.06
"	30	.67	"	17	.05 [Sleet]
June.....	18	.08	"	19	.28
"	19	.75	"	21	.15
"	22	.08	"	22	.03
"	26	.28	February	2	.82
"	26	.10	"	12	.90
"	27	.27	"	13	.60
"	30	.60	March	1	1.47
July	5	.06	"	7	.40
"	6	.10	"	12	.06
"	7	.34	"	16	.22
"	22	.02	"	21	.02
"	26	.41	"	31	.50
August.....	2	1.02			
"	6	.28	SUMMARY.		
"	10	.74	April, 1876	...	.89
"	11	1.70	May	...	4.69
"	13	.35	June.....	...	2.26
"	25	.24	July	...	.93
September	20	.80	August.....	...	4.33
"	24	.45	September	...	1.25
October	21	.50	October	...	.89
"	21	.39	November	...	1.52
November	1	.55	December..... ..	...	2.59
"	13	.05	January, 1877 ...	...	.82
"	14	.20	February	...	2.32
"	23	.62	March	...	2.67

IN MEMORIAM.

EULOGY UPON DR. GEO. W. PEETE.

BY DR. PINCKNEY, U. S N.

I am not insensible to the difficulty of the task assigned me. I address myself to it with diffidence and distrust. But still I had it not in my heart to refuse my humble effort to perpetuate the memory of my distinguished friend and brother, Dr. GEO. W. PEETE. I knew that I should have for my theme the high moral and professional worth of a friend, and for my audience those who had witnessed the highest development of that worth until it reached its culminating point, when death severed the silver cord.

GEO. W. PEETE, M. D., was morally, intellectually and professionally one of those whose influence was necessarily widely extended and powerfully operative. His innate modesty would have discarded this idea, but still you knew and felt it to be true, and the sequel will show whether, gifted with a generous and noble heart, he was alive to the wants and thoughtful of the interest of his fellow men, and bent upon dispensing the light he possessed among those who were less richly endowed. He has perished from our midst, but the good acts of his life remain as imperishable mementoes. It would be difficult to find a more beautiful illustration of what the prac-

ticing physician should be than you daily beheld in the person and bearing of our deceased friend. To the firmness and decision of a man, he united the polish and refinement of a gentleman. Conscious of laborious investigation after truth, he was strong in his own judgment of what was wisest and best. Kindliness was the spirit he loved most to exhibit. Not given to fawning, he knew how to command the respect of others, and ever prompt to do honor to the attainments and skill of his fellow-practitioners, he never failed to secure the confidence of all in himself.

Dr. PEETE was born in Southampton Co., Va., March 3rd, 1813. He was the son of Thomas and Elizabeth Peete. His parents both died before his second year, and he was thus left in the charge of his eldest sister, then sixteen years of age. He enjoyed only the advantages of a country school. He studied medicine under Dr. Jessee A. Bonner, of Brunswick Co., Va., and graduated at the University of Pennsylvania. He was married in 1837, to Miss Rosa McDonald Blunt, an accomplished and lovely woman. In 1834 he entered the navy, and remained in the service nine years, when he resigned his commission and entered into private practice. Although his career in the service was short, he was actively employed, and enjoyed the confidence of all his associates. I have heard Admiral Goldsboro speak of him in terms most flattering, and there was no shrewder or better judge. During a residence in Portsmouth, Va., he rendered valuable service to the citizens of that place during the terrible epidemic of 1855. He was perfectly idolized by the people. It was while here he met with a serious accident, from the effects of which he never entirely recovered. He went to Philadelphia and placed himself under the charge of that eminent surgeon and warm per-

sonal friend Dr. Pancoast. His case was one requiring great skill in the treatment. His sufferings were intense and protracted. After remaining in Philadelphia eight months, he removed to St. Louis, and as soon as he was able, resumed the practice of his profession. For a while he resided at Huntsville. In the fall of 1867 he removed to Galveston, Texas. He was appointed health officer by Gov. E. J. Davis in 1869, and held the position up to the time of his death. To use the language of Rev. Dr. Bunting, who performed the memorial service at Galveston, "he has stood at our commercial gateway with an abiding trust in God, and with daily prayer for guidance, with a full knowledge of the situation, and with all its responsibilities, its censure and its praise; and by his ability to grasp and control that situation, our city has been kept through all this time from the scourge of pestilence, and our people have felt that so long as he occupied that delicate post of public trust and official responsibility, they would be safe."

A brighter character, a more conscientious physician, a purer man, is rarely lost to society. All was as pure gold. The halo of his example will remain.

The heroic death was worthy of the life. At a point a little distant from Galveston, on that fearful night, September 16th, 1875, while the tidal wave of the gulf stream was pouring its surging billows in relentless fury, there stood a noble and manly figure, and by its side a bright and lovely boy of scarce fourteen summers. It was Dr. PEETE and his little grandson, Willie. He had sent his wife to the city, and the boat had returned for him. As he was about to leave, a man approached and asked the doctor for his boat to rescue his wife, who was in a dangerous situation. The doctor knew his own peril, but he said "take it."

The man and his wife were saved, but in the fury of the tempest, rising higher and higher, this brave health officer, with his devoted grandson, met the fiat of Providence. A noble spirit is lost to the profession, but around it is shed a lustre that will never grow dim. He left a fond wife, a devoted son and two lovely grandchildren. Let affection and sympathy cast a shadowing wing over their sad bereavement.

There was another, a stranger to me. Texas has to mourn his loss. Standing at his post of duty, during the same storm, like the brave man and true physician that he was, Dr. LEAKE sacrificed his life at Indianola to save that of others. The chronicle of the death of two such men is a sad duty, but Texas may be proud of these heroes, though her loss is great and enduring.

CONSTITUTION

—OF THE—

TEXAS STATE MEDICAL ASSOCIATION.

ARTICLE I.

The name and style of this Association shall be the "TEXAS STATE MEDICAL ASSOCIATION."

ARTICLE II.

The objects of this Association shall be to organize the Medical Profession of the State in the most efficient manner possible; to encourage a high standard of professional qualification and ethics, and to promote professional brotherhood.

ARTICLE III.

There shall be only one class of members in this Association. Every regularly educated man within the limits of the State, who is a graduate of a regular Medical College in good standing, and who adopts and conforms to the Code of Ethics of the American Medical Association, shall be eligible to membership in this body.

ARTICLE IV.

SECTION 1. The officers of this Association shall be, one President, three Vice Presidents, one Secretary and one Treasurer.

SEC. 2. The President and Vice Presidents shall be elected for one year; the Secretary and Treasurer shall be elected,

each, for five years, and every officer shall remainin office until his successor is duly elected and installed.

ARTICLE V.

SECTION 1. It shall be the duty of the President to preside at all meetings of the Association, when present; to give the casting vote; to see that the rules of order and decorum are enforced in all deliberations of the body; to sign the approved proceedings of each meeting, and to approve such orders as may be drawn upon the Treasurer for expenditures ordered by the Association.

SEC. 2. It shall be the duty of the first Vice President to preside in the absence of the President, and in the absence of the President and first Vice President, the second Vice President shall preside, and in the absence of the President, first and second Vice Presidents, the third Vice President shall preside.

SEC. 3. In the absence of the President and all the Vice Presidents, the Association shall, by ballot, elect one of its members to preside *pro tem.*

SEC. 4. It shall be the duty of the Secretary to keep a true and correct record of the proceedings of each meeting, preserve all books, papers and things belonging to the archives of the Association, attest all orders drawn upon the Treasurer for moneys appropriated by the Association, keep the accounts of the Association with its members, keep a register of the members, the dates of their admission and places of residence. He shall collect all moneys due from the members, and pay the same to the Treasurer, taking his receipt therefor. He shall attend all committees that may be appointed by the Association, with such documents as may be necessary for reference; report such unfinished business of previous meetings as

may appear on his books, requiring action, and attend to such other business as the Association may direct. He shall also supervise and conduct all the correspondence of the Association.

SEC. 5. It shall be the duty of the Treasurer to receive all moneys delivered to him by the Secretary, passing his receipt for the same, and to pay moneys endorsed by the President and attested by the Secretary, and if required, to give bond for the faithful performance of the duties of his office.

ARTICLE VI.

Vacancies occurring in the offices of the Association shall be filled by appointment by the President.

ARTICLE VII.

County Medical Associations shall be entitled to two delegates to the meetings of this Association for every ten members comprising their societies, and one for every additional five members, and shall have two votes upon all questions; and all Medical Colleges in the State, holding charters from the State, with seven professors, shall be entitled to two votes; and no member shall be allowed to vote who is not a delegate of some Association or Medical College, except such member live in a county where no Association exists, said county delegates being entitled to one vote.

ARTICLE VIII.

This Constitution shall immediately take effect from its adoption.

BY-LAWS.

ARTICLE I.

The Texas State Medical Association shall meet annually, at such time and place as may be determined by the majority of those members attending the previous meeting.

ARTICLE II.

Fifteen members, or any number over, shall constitute a quorum for business.

ARTICLE III.

The President shall call the meeting to order, cause the Secretary to read the proceedings of the previous meeting, which, after approval, shall be adopted.

ARTICLE IV.

In case there be no quorum, the meeting shall adjourn from day to day until such quorum be had.

ARTICLE V.

The fee of admission shall be five dollars, U. S. currency, and the annual dues of each member, two dollars and fifty cents, U. S. currency.

[Amendment, adopted seventh annual session, 1875.

On motion of Dr. M. A. Taylor:

Resolved, That the By-Laws of the State Medical Association be so changed as to tax the members of the Association the sum of five dollars, instead of two dollars and fifty cents, per annum, and that each member of the various County organizations be taxed the sum of one dollar per annum.]

ARTICLE VI.

The usual parliamentary rules govening deliberative bodies shall govern the business workings of this Association.

ARTICLE VII.

All questions of business before this Association shall be determined by a majority of the votes present, except as to censure or expulsion of a member, in which case a two-thirds vote shall be required.

ARTICLE VIII.

It shall be the duty of the President to deliver, at each annual meeting of this Association, an address, and, in addition, the Association shall elect by ballot, one member to read an essay upon some medical subject of his own selection.

ARTICLE IX.

A committee of one member from each county represented shall constitute a Committee on Nominations for officers and place of meeting. Said committee shall report action one day prior to adjournment.

ARTICLE X.

No member of this Association, or delegate, shall absent himself from a meeting of this Association without special permission of the President, or from the session without the consent of the Association; the sense of the Association to be taken by vote.

ARTICLE XI.

The Secretary of the Association shall receive, as a compliment, at each annual session, a draft order from the President upon the Treasurer, for the sum of two hundred dollars, for valuable services rendered the Association; said order to be paid by the Treasurer; and he shall also be allowed to draw upon the Treasurer, as usual, for expenses incident to the office.

ARTICLE XII.

It shall be the duty of the President, three months prior to each annual meeting of this Association, to notify, by circular, the profession of the State (and urge attendance), and county organizations throughout the State.

JUDICIAL COUNCIL.

A Council, consisting of twenty-one members, shall be appointed by the Nominating Committee, whose duty it shall be to take cognizance of, and decide, all questions of an Ethical or Judicial character that may arise in connection with the Association. Of the twenty-one members of the Council first appointed, the seven first named on the list shall hold office for one year, and the second seven named shall hold office two years.

With these exceptions, the term of office of members of the Council shall be three years, being appointed by the Nominating Committee annually.

The said Council shall organize by choosing a President and Secretary, and shall keep a permanent record of its proceedings. The decisions of said Council, on all matters referred to it by the Association, shall be final, and shall be reported to the Association at the earliest practicable moment.

All questions of a personal character, including complaints and protests, and all questions on credentials, shall be referred at once, after the report of the Committee of Arrangements or other presentation, to the Judicial Council, and without discussion.

SECTIONS.

The general meeting of the Association shall be restricted to the morning sessions; and the afternoon sessions, commencing

at three o'clock, shall be devoted to the hearing of reports and papers and their consideration, in the following sections:

1st—Practical Medicine, Materia Medica, and Physiology.

2nd—Obstetrics, and Diseases of Women and Children.

3rd—Surgery and Anatomy.

4th—Medical Jurisprudence, Chemistry, and Psychology.

5th—State Medicine, and Public Hygiene.

The Chairman and Secretary of the several sections shall, like other officers of the Association, be nominated by the special committee of one member from each county represented at the meeting, and elected by a vote on a general ticket. They shall hold their office until the close of the proper business of the annual meeting, next succeeding their election, and until their successors are appointed.

The section on State Medicine and Public Hygiene shall be composed of one member from each county, representing, as far as practicable, the County Board of Health. The officers of this section to be also designated by the Committee of Nomination.

The Chairman of the several sections shall prepare, and read in the general sections of the Association, papers on the advance and discoveries of the past year in the branch of science, included in their respective sections; the reading of such papers not to occupy longer than forty minutes for each.

Papers appropriate to the several sections, in order to secure consideration and action, must be sent to the Secretary of the appropriate sections at least one month before the meeting which is to act upon them. It shall be the duty of the Secretary, to whom such papers are sent, to examine them with care, and, with the advice of the Chairman of his section, to determine the time and order of their presentation, and to

give due notice of the same; and after their full examination and discussion by the section, they shall be sent to the permanent Secretary of the Association.

No paper shall be read before either of the sections, the reading of which occupies more than twenty minutes. Such papers shall be referred by the section to sub-committees, especially appointed for their examination. The sub-committees shall be allowed thirty days for such examination; at the end of which time they shall forward the papers to the Committee of Publication, with such recommendations as they may deem proper. The author of such papers, however, may read abstracts before the section within the allotted twenty minutes. No member shall address the section more than once upon the same subject, nor speak longer than fifteen minutes without unanimous consent.

All papers presented directly to the Association, and other matters, may, at the discretion of the Association, be referred to the various sections for their consideration and report.

STANDING COMMITTEES.

The following are the standing committees of the Association, to be filled by the Committee on Nominations, and to report at the next annual meeting subsequent to their appointment, viz.: Committee of Arrangements; Committee of Publication; Committee on Prize Essays, and Committee on Texas State Medical Necrology.

The Committee of Publication shall append to each volume of the Transactions hereafter published, a copy of the Constitution, By-laws, Code of Ethics of the Association, and a complete list of all members in full fellowship, and their respective places of abode.

It shall print conspicuously at the beginning of each volume of the Transactions, the following disclaimer, viz.: The Texas State Medical Association, although formally accepting and publishing the reports of the various standing committees, holds itself wholly irresponsible for the opinions, theories, or criticisms therein contained, except when otherwise decided by special resolution.

The Committee on Prize Essays shall consist of five members, residing in the same neighborhood, whose duty it shall be, in the interval between the present and the next succeeding annual sessions, to receive original papers upon any medical subject, from any person who may choose to send them; to decide upon the merits of these papers, and to select for presentation to the Association, at its next session, such as they may deem worthy of being thus presented. The committee shall have power to form such regulations, as to the mode in which the papers are to be presented, and as to the observing of secrecy, as they may think proper; and also to award one prize of one hundred dollars to the best original communication reported on favorably by them, and directed by the Association to be published.

The Committee on Texas State Medical Necrology shall consist of one member for each county represented in the Association, whose duty it shall be to procure memorials of the eminent and worthy dead among the distinguished physicians of their respective counties, and transmit them to the chairman of this committee, on or before the first of April of each and every year.

THE PUBLICATION OF PAPERS AND REPORTS.

No paper or report shall be entitled to publication in the volume, for the year in which it shall be presented to the Asso-

ciation, unless it be placed in the hands of the Committee of Publication on or before the first day of July. It must also be so prepared as to require no material alteration or addition at the hands of its author.

Authors of papers are required to return their proofs within two weeks after their reception; otherwise they will be passed over and omitted from the volume.

The Committee of Publication shall have full discretionary power to omit from the published Transactions, in part, or in whole, any paper that may be referred to it by the Association or either of the sections, unless specially instructed to the contrary by vote of the Association.

ORDINANCES.

Resolved, That the several Sections of this Association be requested, in the future, to refer no papers or reports to the Committee of Publication, except such as can be fairly classed under one of the three following heads, viz.:

1st. Such as may contain and establish *positively* new facts, modes of practice, or principles of real value.

2nd. Such as may contain the results of well-devised original experimental researches.

3rd. Such as present so complete a review of the facts on any particular subject as to enable the writer to deduce therefrom legitimate conclusions of importance.

Resolved, That the several Sections be requested, in the future, to refer all such papers as may be presented to them for examination by this Association, that contain matter of more or less value, and yet cannot be fairly ranked under either of the heads mentioned in the foregoing resolution, back to their

authors with the recommendation that they be published in such regular medical periodicals as said author may select, with the privilege of placing at the head of such papers: "Read to the——— Section of the Texas State Medical Association on the—— day of——— 18—."

Resolved, That at the future meetings of the Texas State Medical Association, no report of Standing Committees or communications shall be read before the Association which exceeds twenty pages of letter paper. (Vide *Trans.* Seventh An. Ses., p. 33.)

Resolved, That to the end of securing the establishment of a National Board of Health by Congress, this Association solicits the co-operation of the State Medical Associations of the sea-board States, and of the members of Congress from this State. (Vide *Trans.* Seventh An. Ses., p. 16.)

Resolved, That in the opinion of this Association, towns, cities, and corporations should not rely upon quarantine alone, as preventive of yellow fever, since, in these days of rapid inter-communication, absolute quarantine is impracticable. We therefore recommend the strictest hygienic measures—complete drainage, removal of all putrescent accumulations, animal or vegetable—as promising the best means of protection. (Vide *Trans.* Seventh An. Ses., p. 32.)

Resolved, That we, as an Association, and members of the medical profession, have not arrayed ourselves in opposition to the Press. We recognize in it a power second to no other when properly exerted to effect much good, yet we feel that the placarding and advertising resorted to by quacks, and even, sometimes, by ostensible members of our Associations, is highly reprehensible, in that they make false assurances and promise cures not warranted by science; but between

these and the true physician having the good of humanity alone in view, and a strict regard for truth, the Press has heretofore failed to make any distinction—stating whatever the imposter may pay for, without any regard to the merit of the party. Therefore, the public at large, as well as the medical profession, have reasonably concluded that he who thus asserts his claims to superior merit, even though he may wear the badge of membership to our Association, is a quack, charlatan and imposter, trading in his profession, and bidding for the confidence of the ignorant and credulous. (Vide *Trans.* Seventh An. Ses., p. 19.)

Resolved, That all members of this Association in arrears for dues, over fifteen months, shall stand suspended, and their names be dropped from the roll; the same to be reinstated at any time by paying up all back dues. It shall be the duty of the Secretary to notify all members behind for dues, immediately after the adjournment of this body, and request immediate payment. (Vide *Trans.* Eighth An. Ses., p. 21.)

Resolved, That all physicians, recognized as members in the original organization of the Association, be permitted to perfect their membership by the payment of the regular fees and dues to date. (Vide *Trans.* Eighth An. Ses., p. 28.)

Resolved, That County Societies be requested to furnish a list of physicians in the county, as well as of members; to give population of county, number of births, deaths, cause of death, age at death, sex and race; diseases that have prevailed; localities, with a description of the latter, in order to ascertain, if possible, the causes of disease; also, an abstract of contents of papers read, an abstract of discussions, surgical operations and results. (Vide *Trans.* Eighth An. Ses., p. 31.)

Resolved, That the State Medical Association, anxious as it is to do all in its power to prevent the appearance of yellow

fever or other malignant disease, or to mitigate their severity should any portion of our State be visited, do hereby advise and earnestly urge upon the authorities and people of all localities liable to be visited by such diseases, the prompt adoption and rigid enforcement of proper sanitary regulations, and to appoint Boards of Health, through whom the proper rules for ventilation, fumigation and disinfection can be efficiently enforced.

Adopted and referred to the Committee on State Board of Health. (Vide *Trans.* Eighth An. Ses., p. 22.)

CODE OF MEDICAL ETHICS.

OF THE DUTIES OF PHYSICIANS TO THEIR PATIENTS, AND OF THE OBLIGATIONS OF PATIENTS TO THEIR PHYSICIANS.

ART. I.—*Duties of physicians to their patients.*

SECTION 1. A physician should not only be ever ready to obey the calls of the sick, but his mind ought also to be imbued with the greatness of his mission, and the responsibility he habitually incurs in its discharge. These obligations are the more deep and enduring, because there is no tribunal other than his own conscience to adjudge penalties for carelessness or neglect. Physicians should, therefore, minister to the sick with due impressions of the importance of their office; reflecting that the ease, the health, and the lives of those committed to their charge, depend on their skill, attention, and fidelity. They should study, also, in their deportment, so to unite *tenderness* with *firmness*, and *condescension* with *authority*, as to inspire the minds of their patients with gratitude, respect and confidence.

SEC. 2. Every case committed to the charge of a physician should be treated with attention, steadiness, and humanity. Reasonable indulgence should be granted to the mental imbecility and caprices of the sick. Secrecy and delicacy, when required by peculiar circumstances, should be strictly observed; and the familiar and confidential intercourse to which physi-

cians are admitted in their professional visits, should be used with discretion, and with the most scrupulous regard to fidelity and honor. The obligation of secrecy extends beyond the period of professional services;—none of the privacies of personal and domestic life, no infirmity of disposition or flaw of character observed during professional attendance should ever be divulged by the physician except when he is imperatively required to do so. The force and necessity of this obligation are indeed so great, that professional men have, under certain circumstance, been protected in their observance of secrecy by courts of justice.

SEC. 3. Frequent visits to the sick are in general requisite, since they enable the physician to arrive at a more perfect knowledge of the disease—to meet promptly every change which may occur, and also tend to preserve the confidence of the patient. But unnecessary visits are to be avoided, as they give useless anxiety to the patient, tend to diminish the authority of the physician, and render him liable to be suspected of interested motives.

SEC. 4. A physician should not be forward to make gloomy prognostications, because they savor of empiricism, by magnifying the importance of his services in the treatment or cure of the disease. But he should not fail, on proper occasions, to give to the friends of the patient timely notice of danger when it really occurs; and even to the patient himself, if absolutely necessary. This office, however, is so peculiarly alarming when executed by him, that it ought to be declined whenever it can be assigned to any other person of sufficient judgment and delicacy. For the physician should be the minister of hope and comfort to the sick; that, by such cordials to the drooping spirit, he may smooth the bed of death, re-

vive expiring life, and counteract the depressing influence of those maladies which often disturb the tranquility of the most resigned in their last moments. The life of a sick person can be shortened not only by the acts, but also by the words or the manner of a physician. It is, therefore, a sacred duty to guard himself carefully in this respect, and to avoid all things which have a tendency to discourage the patient and to depress his spirits.

SEC. 5. A physician ought not to abandon a patient because the case is deemed incurable; for his attendance may continue to be highly useful to the patient, and comforting to the relatives around him, even in the last period of a fatal malady, by alleviating pain and other symptoms, and by soothing mental anguish. To decline attendance, under such circumstances, would be sacrificing to fanciful delicacy and mistaken liberality, that moral duty, which is independent of, and far superior to, all pecuniary consideration.

SEC. 6. Consultations should be promoted in difficult or protracted cases, as they give rise to confidence, energy, and more enlarged views in practice.

SEC. 7. The opportunity which a physician not unfrequently enjoys of promoting and strengthening the good resolutions of his patients, suffering under the consequences of vicious conduct, ought never to be neglected. His counsels, or even remonstrances, will give satisfaction, not offence, if they be proffered with politeness, and evince a genuine love of virtue, accompanied by a sincere interest in the welfare of the person to whom they are addressed.

ART. 2.—*Obligations of patients to their physicians.*

SECTION 1. The members of the medical profession, upon whom is enjoined the performance of so many important and ar-

duous duties toward the community, and who are required to make so many sacrifices of comfort, ease and health, for the welfare of those who avail themselves of their services, certainly have a right to expect and require, that their patients should entertain a just sense of the duties which they owe to their medical attendants.

SEC. 2. The first duty of a patient is to select as his medical adviser one who has received a regular professional education. In no trade or occupation do mankind rely on the skill of an untaught artist; and in medicine, confessedly the most difficult and intricate of the sciences, the world ought not to suppose that knowledge is intuitive.

SEC. 3. Patients should prefer a physician whose habits of life are regular, and who is not devoted to company, pleasure, or to any pursuit incompatible with his professional obligations. A patient should, also, confide the care of himself and family, as much as possible, to one physician; for a medical man who has become acquainted with the peculiarities of constitution, habits, and predisposition of those he attends, is more likely to be successful in his treatment than one who does not possess that knowledge.

A patient who has thus selected his physician should always apply for advice in what may appear to him trivial cases, for the most fatal results often supervene on the slightest accidents. It is of still more importance that he should apply for assistance in the forming stage of violent diseases; it is to a neglect of this precept that medicine owes much of the uncertainty and imperfection with which it has been reproached.

SEC. 4. Patients should faithfully and unreservedly communicate to their physician the supposed cause of their disease. This is the more important, as many diseases of a mental ori-

gin simulate those depending on external causes, and yet are only to be cured by ministering to the mind diseased. A patient should never be afraid of thus making his physician his friend and adviser; he should always bear in mind that a medical man is under the strongest obligations of secrecy. Even the female sex should never allow feelings of shame or delicacy to prevent their disclosing the seat, symptoms, and causes of complaints peculiar to them. However commendable a modest reserve may be in the common occurrences of life, its strict observance in medicine is often attended with the most serious consequences, and a patient may sink under a painful and loathsome disease, which might have been readily prevented had timely intimation been given to the physician.

SEC. 5. A patient should never weary his physician with a tedious detail of events or matters not appertaining to his disease. Even as relates to his actual symptoms, he will convey much more real information by giving clear answers to interrogatories, than by the most minute account of his own framing. Neither should he obtrude upon his physician the details of his business nor the history of his family concerns.

SEC. 6. The obedience of a patient to the prescriptions of his physician should be prompt and implicit. He should never permit his own crude opinions as to their fitness to influence his attention to them. A failure in one particular may render an otherwise judicious treatment dangerous, and even fatal. This remark is equally applicable to diet, drink, and exercise. As patients become convalescent, they are very apt to suppose that the rules prescribed for them may be disregarded, and the consequence, but too often, is a relapse. Patients should never allow themselves to be persuaded to take any medicine

whatever, that may be recommended to them by the self-constituted doctors and doctresses who are so frequently met with, and who pretend to possess infallible remedies for the cure of every disease. However simple some of their prescriptions may appear to be, it often happens that they are productive of much mischief, and in all cases they are injurious, by contravening the plan of treatment adopted by the physician.

SEC. 7. A patient should, if possible, avoid even the *friendly visits of a physician* who is not attending him—and when he does receive them, he should never converse on the subject of his disease, as an observation may be made, without any intention of interference, which may destroy his confidence in the course he is pursuing, and induce him to neglect the directions prescribed to him. A patient should never send for a consulting physician without the express consent of his own medical attendant. It is of great importance that physicians should act in concert; for, although their modes of treatment may be attended with equal success when employed singly, yet conjointly they are very likely to be productive of disastrous results.

SEC. 8. When a patient wishes to dismiss his physician, justice and common courtesy require that he should declare his reasons for so doing.

SEC. 9. Patients should always, when practicable, send for their physician in the morning, before his usual hour of going out; for by being early aware of the visits he has to pay during the day, the physician is able to apportion his time in such a manner as to prevent an interference of engagements. Patients should also avoid calling on their medical adviser unnecessarily during the hours devoted to meals or sleep. They should always be in readiness to receive the visits of their physician,

as the detention of a few minutes is often of serious inconvenience to him.

SEC. 10. A patient should, after his recovery, entertain a just and enduring sense of the value of the services rendered him by his physician; for these are of such a character, that no mere pecuniary acknowledgment can repay or cancel them.

OF THE DUTIES OF PHYSICIANS TO EACH OTHER, AND TO THE PROFESSION AT LARGE.

ART. I.—*Duties for the support of professional character.*

SECTION 1. Every individual, on entering the profession, as he becomes thereby entitled to all its privileges and immunities, incurs an obligation to exert his best abilities to maintain its dignity and honor, to exalt its standing, and to extend the bounds of its usefulness. He should, therefore, observe strictly such laws as are instituted for the government of its members;—should avoid all contumelious and sarcastic remarks relative to the faculty as a body; and while, by unwearied diligence, he resorts to every honorable means of enriching the science, he should entertain a due respect for his seniors, who have, by their labors, brought it to the elevated condition in which he finds it.

SEC. 2. There is no profession, from the members of which greater purity of character, and a higher standard of moral excellence are required, than the medical; and to attain such eminence is a duty every physician owes alike to his profession and to his patients. It is due to the latter, as without it he cannot command their respect and confidence, and to both, because no scientific attainments can compensate for the want of correct moral principles. It is also incumbent upon the faculty to be temperate in all things, for the practice of physic

requires the unremitting exercise of a clear and vigorous understanding; and, on emergencies, for which no professional man should be unprepared, a steady hand, an acute eye, and an unclouded head may be essential to the well-being, and even to the life, of a fellow-creature.

SEC. 3. It is derogatory to the dignity of the profession to resort to public advertisements, or private cards, or handbills, inviting the attention of individuals affected with particular diseases—publicly offering advice and medicine to the poor, gratis, or promising radical cures; or to publish cases and operations in the daily prints, or suffer such publications to be made; to invite laymen to be present at operations, to boast of cures and remedies, to adduce certificates of skill and success, or to perform any other similar acts. These are the ordinary practices of empirics, and are highly reprehensible in a regular physician.

SEC. 4. Equally derogatory to professional character is it for a physician to hold a patent for any surgical instrument or medicine; or to dispense a secret *nostrum,* whether it be the composition or exclusive property of himself or of others. For, if such nostrum be of real efficacy, any concealment regarding it is inconsistent with beneficence and professional liberality; and if mystery alone give it value and importance, such craft implies either disgraceful ignorance or fraudulent avarice. It is also reprehensible for physicians to give certificates attesting the efficacy of patent or secret medicines, or in any way to promote the use of them.

ART. II.—*Professional services of physicians to each other.*

SECTION 1. All practitioners of medicine, their wives, and their children while under the paternal care, are entitled to

the gratuitous services of any one or more of the faculty residing near them, whose assistance may be desired. A physician afflicted with disease is usually an incompetent judge of his own case; and the natural anxiety and solicitude which he experiences at the sickness of a wife, a child, or any one who, by the ties of consanguinity, is rendered peculiarly dear to him, tend to obscure his judgment, and produce timidity and irresolution in his practice. Under such circumstances, medical men are peculiarly dependent upon each other, and kind offices and professional aid should always be cheerfully and gratuitously afforded. Visits ought not, however, to be obtruded officiously; as such unasked civility may give rise to embarrassment, or interfere with that choice on which confidence depends. But, if a distant member of the faculty, whose circumstances are affluent, request attendance, and an honorarium be offered, it should not be declined; for no pecuniary obligation ought to be imposed, which the party receiving it would wish not to incur.

Art. III.—*Of the duties of physicians as respects vicarious offices.*

Section I. The affairs of life, the pursuit of health, and the various accidents and contingences to which a medical man is peculiarly exposed, sometimes require him temporarily to withdraw from his duties to his patients, and to request some of his professional brethren to officiate for him. Compliance with this request is an act of courtesy, which should always be performed with the utmost consideration for the interest and character of the family physician, and when exercised for a short period, all the pecuniary obligations for such service should be awarded to him. But if a member of the profes-

sion neglect his business in quest of pleasure and amusement, he cannot be considered as entitled to the advantages of the frequent and long-continued exercise of this fraternal courtesy, without awarding to the physician who officiates, the fees arising from the discharge of his professional duties.

In obstetrical and important surgical cases, which give rise to unusual fatigue, anxiety, and responsibility, it is just that the fees accruing therefrom should be awarded to the physician who officiates.

ART. IV.—*Of the duties of physicians in regard to consultations.*

SECTION 1. A regular medical education furnishes the only presumptive evidence of professional abilities and acquirements, and ought to be the only acknowledged right of an individual to the exercise and honors of his profession. Nevertheless, as in consultations the good of the patient is the sole object in view, and this is often dependent on personal confidence, no intelligent regular practitioner, who has a license to practise from some medical board of known and acknowledged respectability, recognized by this Association, and who is in good moral and professional standing in the place in which he resides, should be fastidiously excluded from fellowship, or his aid refused in consultation, when it is requested by the patient. But no one can be considered as a regular practitioner or a fit associate in consultation, whose practice is based on an exclusive dogma, to the rejection of the accumulated experience of the profession, and of the aids actually furnished by anatomy, physiology, pathology, and organic chemistry.

SEC. 2. In consultations, no rivalship or jealousy should be indulged; candor, probity, and all due respect should be exercised towards the physician having charge of the case.

SEC. 3. In consultations, the attending physician should be the first to propose the necessary questions to the sick; after which the consulting physician should have the opportunity to make such further inquiries of the patient as may be necessary to satisfy him of the true character of the case. Both physicians should then retire to a private place for deliberation; and the one first in attendance should communicate the directions agreed upon to the patient or his friends, as well as any opinions which it may be thought proper to express. But no statement or discussion of it should take place before the patient or his friends, except in the presence of all the faculty attending, and by their common consent; and no *opinions* or *prognostications* should be delivered which are not the result of previous deliberation and concurrence.

SEC. 4. In consultations, the physician in attendance should deliver his opinion first; and when there are several consulting, they should deliver their opinions in the order in which they have been called in. No decision, however, should restrain the attending physician from making such variations in the mode of treatment as any subsequent unexpected change in the character of the case may demand. But such variation, and the reasons for it, ought to be carefully detailed at the next meeting in consultation. The same privilege belongs also to the consulting physician if he is sent for in an emergency, when the regular attendant is out of the way, and similar explanations must be made by him at the next consultation.

SEC. 5. The utmost punctuality should be observed in the visits of physicians when they are to hold consultation together, and this is generally practicable, for society has been considerate enough to allow the plea of a professional engage-

ment to take precedence of all others, and to be an ample reason for the relinquishment of any present occupation. But as professional engagements may sometimes interfere, and delay one of the parties, the physician who first arrives should wait for his associate a reasonable period, after which the consultation should be considered as postponed to a new appointment. If it be the attending physician who is present, he will of course see the patient and prescribe; but if it be the consulting one, he should retire, except in case of emergency, or when he has been called from a considerable distance, in which latter case he may examine the patient, and give his opinion in *writing*, and *under seal*, to be delivered to his associate.

SEC. 6. In consultations, theoretical discussions should be avoided, as occasioning perplexity and loss of time. For there may be much diversity of opinion concerning speculative points, with perfect agreement in those modes of practice which are founded, not on hypothesis, but on experience and observation.

SEC. 7. All discussions in consultation should be held as secret and confidential. Neither by words nor manner should any of the parties to a consultation assert or insinuate that any part of the treatment pursued did not receive his assent. The responsibility must be equally divided between the medical attendants—they must equally share the credit of success as well as the blame of failure.

SEC. 8. Should an irreconcilable diversity of opinion occur when several physicians are called upon to consult together, the opinion of the majority should be considered as decisive; but if the numbers be equal on each side, then the decision should rest with the attending physician. It may, moreover,

sometimes happen that two physicians cannot agree in their views of the nature of a case, and the treatment to be pursued. This is a circumstance much to be deplored, and should always be avoided, if possible, by mutual concessions, as far as they can be justified by a conscientious regard for the dictates of judgment. But in the event of its occurrence, a third physician should, if practicable, be called to act as umpire; and, if circumstances prevent the adoption of this course, it must be left to the patient to select the physician in whom he is most willing to confide. But, as every physician relies upon the rectitude of his judgment, he should, when left in the minority, politely and consistently retire from any further deliberation in the consultation, or participation in the management of the case.

SEC. 9. As circumstances sometimes occur to render a *special consultation* desirable, when the continued attendance of two physicians might be objectionable to the patient, the member of the faculty whose assistance is required in such cases should sedulously guard against all future unsolicited attendance. As such consultations require an extraordinary portion both of time and attention, at least a double honorarium may be reasonably expected.

SEC. 10. A physician who is called upon to consult, should observe the most honorable and scrupulous regard for the character and standing of the practitioner in attendance; the practice of the latter, if necessary, should be justified as far as it can be, consistently with a conscientious regard for truth, and no hint or insinuation should be thrown out which could impair the confidence reposed in him, or affect his reputation. The consulting physician should also carefully refrain from any of those extraordinary attentions or assiduities which are

too often practiced by the dishonest for the base purpose of gaining applause, or ingratiating themselves into the favor of families and individuals.

ART. V.—*Duties of physicians in cases of interference.*

SECTION 1. Medicine is a liberal profession, and those admitted into its ranks should found their expectations of practice upon the extent of their qualifications, not on intrigue or artifice.

SEC. 2. A physician, in his intercourse with a patient under the care of another practitioner, should observe the strictest caution and reserve. No meddling inquiries should be made —no disingenuous hints given relative to the nature and treatment of his disorder; nor any course of conduct pursued that may directly or indirectly tend to diminish the trust reposed in the physician employed.

SEC. 3. The same circumspection and reserve should be observed when, from motives of business or friendship, a physician is prompted to visit an individual who is under the direction of another practitioner. Indeed, such visits should be avoided, except under peculiar circumstances; and when they are made, no particular inquiries should be instituted relative to the nature of the disease, or the remedies employed, but the topics of conversation should be as foreign to the case as circumstances will admit.

SEC. 4. A physician ought not to take charge of or prescribe for a patient who has recently been under the care of another member of the faculty in the same illness, except in cases of sudden emergency, or in consultation with the physician previously in attendance, or when the latter has relinquished the case, or been regularly notified that his services are no longer

desired. Under such circumstances no unjust and illiberal insinuations should be thrown out in relation to the conduct or practice previously pursued, which should be justified as far as candor and regard for truth and probity will permit; for it often happens that patients become dissatisfied when they do not experience immediate relief, and, as many diseases are naturally protracted, the want of success, in the first stage of treatment, affords no evidence of a lack of professional knowledge and skill.

SEC. 5. When a physician is called to an urgent case, because the family attendant is not at hand, he ought, unless his assistance in consultation be desired, to resign the care of the patient to the latter immediately on his arrival.

SEC. 6. It often happens in cases of sudden illness, or of recent accidents and injuries, owing to the alarm and anxiety of friends, that a number of physicians are simultaneously sent for. Under these circumstances, courtesy should assign the patient to the first who arrives, who should select from those present any additional assistance that he may deem necessary. In all such cases, however, the practitioner who officiates should request the family physician, if there be one, to be called, and, unless his further attendance be requested, should resign the case to the latter on his arrival.

SEC. 7. When a physician is called to the patient of another practitioner, in consequence of the sickness or absence of the latter, he ought, on the return or recovery of the regular attendant and with the consent of the patient, to surrender the case.

[The expression, "patient of another practitioner," is understood to mean a patient who may have been under the charge of another practitioner at the time of the attack of sick-

ness, or departure from home of the latter, or who may have called for his attendance during his absence or sickness, or in any other manner given it to be understood that he regarded the said physician as his regular medical attendant.]

SEC. 8. A physician, when visiting a sick person in the country may be desired to see a neighboring patient who is under the regular direction of another physician, in consequence of some sudden change or aggravation of symptoms. The conduct to be pursued on such an occasion is to give advice adapted to present circumstances; to interfere no further than is absolutely necessary with the general plan of treatment; to assume no future direction unless it be expressly desired; and, in this last case, to request an immediate consultation with the practitioner previously employed.

SEC. 9. A wealthy physician should not give advice *gratis* to the affluent; because his doing so is an injury to his professional brethren. The office of a physician can never be supported as an exclusively beneficent one; and it is defrauding, in some degree, the common funds for its support, when fees are dispensed with which might justly be claimed.

SEC. 10. When a physician who has been engaged to attend a case of midwifery is absent, and another is sent for, if delivery is accomplished during the attendance of the latter, he is entitled to the fee, but should resign the patient to the practitioner first engaged.

ART. VI.—*Of differences between physicians.*

SECTION 1. Diversity of opinion and opposition of interest may, in the medical as in other professions, sometimes occasion controversy and even contention. Whenever such cases unfortunately occur, and cannot be immediately terminated,

they should be referred to the arbitration of a sufficient number of physicians or a *court-medical.*

SEC. 2. As peculiar reserve must be maintained by physicians towards the public, in regard to professional matters, and as there exist numerous points in medical ethics and etiquette through which the feelings of medical men may be painfully assailed in their intercourse with each other, and which cannot be understood or appreciated by general society, neither the subject-matter of such differences nor the adjudication of the arbitrators should be made public, as publicity in a case of this nature may be personally injurious to the individuals concerned, and can hardly fail to bring discredit on the faculty.

ART. VII.—*Of pecuniary acknowledgments.*

Some general rules should be adopted by the faculty, in every town or district, relative to *pecuniary acknowledgments* from their patients; and it should be deemed a point of honor to adhere to these rules with as much uniformity as varying circumstances will admit.

OF THE DUTIES OF THE PROFESSION TO THE PUBLIC, AND OF THE OBLIGATIONS OF THE PUBLIC TO THE PROFESSION.

ART. I.—*Duties of the profession to the public.*

SECTION 1. As good citizens, it is the duty of physicians to be ever vigilant for the welfare of the community, and to bear their part in sustaining its institutions and burdens; they should also be ever ready to give counsel to the public in relation to matters especially appertaining to their profession, as on subjects of medical police, public hygiene, and legal medicine. It is their province to enlighten the public in regard to quarantine regulations—the location, arrangement, and dieta

ries of hospitals, asylums, schools, prisons, and similar institutions—in relation to the medical police of towns, as drainage, ventilation, etc.—and in regard to measures for the prevention of epidemic and contagious diseases; and when pestilence prevails, it is their duty to face the danger, and to continue their labors for the alleviation of the suffering, even at the jeopardy of their own lives.

SEC. 2. Medical men should also be always ready, when called on by the legally constituted authorities, to enlighten coroners' inquests and courts of justice, on subjects strictly medical—such as involve questions relating to sanity, legitimacy, murder by poisons or other violent means, and in regard to the various other subjects embraced in the science of Medical Jurisprudence. But in these cases, and especially where they are required to make a *post-mortem* examination, it is just, in consequence of the time, labor, and skill required, and the responsibility and risk they incur, that the public should award them a proper honorarium.

SEC. 3. There is no profession by the members of which eleemosynary services are more liberally dispensed than the medical, but justice requires that some limits should be placed to the performance of such good offices. Poverty, professional brotherhood, and certain of the public duties referred to in the first section of this article, should always be recognized as presenting valid claims for gratuitous services; but neither institutions endowed by the public or by rich individuals, societies for mutual benefit, for the insurance of lives or for analogous purposes, nor any profession or occupation, can be admitted to possess such privilege. Nor can it be justly expected of physicians to furnish certificates of inability to serve on juries, to perform militia duty, or to testify to the state of

health of persons wishing to insure their lives, obtain pensions, or the like, without a pecuniary acknowledgment. But to individuals in indigent circumstances, such professional service should always be cheerfully and freely accorded.

SEC. 4. It is the duty of physicians, who are frequent witnesses of the enormities committed by quackery, and the injury to health and even destruction of life caused by the use of quack medicines, to enlighten the public on these subjects, to expose the injuries sustained by the unwary from the devices and pretensions of artful empirics and imposters. Physicians ought to use all the influence which they may possess, as professors in Colleges of Pharmacy, and by exercising their option in regard to the shops to which their prescriptions shall be sent, to discourage druggists and apothecaries from vending quack or secret medicines, or from being in any way engaged in their manufacture and sale.

ART. II.—*Obligations of the public to physicians.*

SEC. 1. The benefits accruing to the public, directly and indirectly, from the active and unwearied beneficence of the profession, are so numerous and important, that physicians are justly entitled to the utmost consideration and respect from the community. The public ought likewise to entertain a just appreciation of medical qualifications: to make a proper discrimination between true science and the assumptions of ignorance and empiricism—to afford every encouragement and facility for the acquisition of medical education—and no longer to allow the statute-books to exhibit the anomaly of exacting knowledge from physicians, under a liability to heavy penalties, and of making them obnoxious to punishment for resorting to the only means of obtaining it.

Resolved, That this Association recognizes specialties as proper and legitimate fields of practice.

Resolved, That specialists shall be governed by the same rules of professional etiquette as have been laid down for general practitioners.

Resolved, That it shall not be proper for specialists publicly to advertise themselves such, or to assume any title not specially granted by a regularly chartered college.

Resolved, That private handbills addressed to members of the medical profession, or by cards in medical journals, calling the attention of professional brethren to themselves as specialists, be declared in violation of the Code of Ethics of the American Medical Association. (Vide *Trans.* A. M. A., vol., xx. p. 28.)

Whereas, The proper construction of Art. IV., Sec. 1, Code of Ethics, A. M. A., having been called for, relative to consultation with irregular practitioners who are graduates of schools:

Resolved, That said Art. IV., Sec. 1. Code of Ethics, excludes all such practitioners from recognition by the regular profession. (Vide *Trans.* A. M. A., vol. xx. p. 30.)

Whereas, The contract system is contrary to medical ethics:

Resolved, That all contract physicians, as well as those guilty of bidding for practice at less rates than those established by a majority of regular graduates of the same locality, be classed as irregular practitioners. (Vide *Trans.* A. M. A., vol. xx. p. 41.)

Resolved, That the members of the medical profession who in any way aid or abet the graduation of medical students in irregular or exclusive systems of medicine, are deemed thereby to violate the spirit of the ethics of the American Medical Association. (Vide *Trans.* A. M. A., vol. xxvii. p. 48.)

ROLL OF MEMBERS.

Names of deceased members are marked *; names on Secretary's but not on Treasurer's book, †; names of members in arrears, ‡; names of members resigned, ⁑.

ASHCOM, J. C.....Brazoria
‡ARCHER, W. A.....Houston
ALLEN, JOHN A .....
ALLEN, R. W.....Dallas
ADAMS, S. P.....Mount Pleasant
ACHESON, ALEX. W.....Denison
BLANCHETTE, W. C., Round Top
BAYLOR, J. N. .....Navasota
*BONNEY, E. T. .....Bellville
BLACKBURN, J. H., Washington
BROWN, H. W. .....Waco
BAYNE, S. M .....Gatesville
BRUCE, L. N.....Mastersville
BOWERS, S. .....Burton
BEALL, E. J. .....Fort Worth
BURROUGHS, J. J.....Houston
BURROUGHS, S. R. ..... Houston
BLOCKER, C. M..... Texarkana
BLOCKER, E B..... Marshall
BURT, W. J..... Austin
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TRANSACTIONS

OF THE

TEXAS

State Medical Association,

TENTH ANNUAL SESSION.

1878.

Held in the City of San Antonio, April 2, 3, 4, and 5.

SAN ANTONIO:
MARTIN & ROBY, HERALD JOB OFFICE.
1878.

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TIME AND PLACE OF NEXT MEETING.

FIRST TUESDAY IN APRIL, 1879.....Sherman.

MINUTES.

FIRST DAY.—MORNING SESSION.

SAN ANTONIO, TEXAS, April 2, 1878.

The Association met at Wolfram's Garden at 10:30 A. M.

The President, Dr. W. D. Kelley called the House to order.

Prayer by Rev. Mr. Neil.

The following gentlemen answered to roll call: Dr. W. D. Kelley, *President*, Dr. George Cupples and Dr. J. H. Sears, *Vice-Presidents;* Dr. W. A. East, *Secretary;* Dr. J. Larendon, *Treasurer;* Dr. T. J. Heard, Dr. Greenville Dowell, Dr. J. R. Robertson, Dr. R. W. White, Dr. H. R. Harrison, Dr. Juo. H. Pope, Dr. J. J. Burroughs, Dr. T. D. Wooten, Dr. W. H. Park, Dr. T. D. Manning, Dr. J. C. R. Renfro, Dr. B. E. Hadra, Dr. T. M. Blakemore, Dr. R. H. L. Bibb, Dr. A. E. Carothers, Dr. J. W. Fennell, Dr. F. Herff, Dr. A. R. Kilpatrick, Dr. S. Bowers, Dr. J. K. Davidson, Dr. George W. Christian, Dr. W. W. Walker, Dr. A. D. Paulers, Dr. B. F. Brittain, Dr. Smith Buford, Dr. Arthur E. Spohn, Dr. R. L. Knox, Dr. John C. Jones.

Dr. F. Herff, from the Committee of Arrangements, in the following address, welcomed the Association:

MR. PRESIDENT AND GENTLEMEN:

The duty of welcoming the members of this assemblage is certainly a great honor to me, and I do not know how I can show myself more worthy of that honor than by making my address as short as possible, not to waste your time, and fatigue your ears by a long talk in bad English.

I first welcome our distinguished guests from other States, some of whom are present to-day, while others will arrive to-night. They are men who have made their mark in medical literature, and who have come great distances to attend this meeting, to participate in our deliberations and share our labors. Their presence here is a great honor to us, but a still greater honor to themselves, as it is a remarkable proof of their readiness to sacrifice private interests and comforts to the interests of our noble profession. The sacred fire of science, which we light to-day in the backwoods of Texas, will perhaps not dazzle their eyes with its brilliancy, but will certainly warm their hearts and leave a favorable impression of the zeal and harmony pervading this assembly. When I look at the stately array of educated and scientific physicians gathered here from all parts of our State, I cannot desist from drawing a comparison of the present with the past. I see amongst you, gentlemen, a few who belong, like myself, to the old guard, who happily for themselves, and perhaps for others, have managed neither to die nor to surrender. To them I call to memory the time, thirty years ago, when I first began to practice in Texas. Regular physicians at that time were few, separated by long distances, without communication with one another, and left to fight alone against the ignorance of the people and the quackery of empyrics. The public then was unable to distinguish between the pill-roller and the scientific man, and by this the social position of the physician was damaged. That condition lasted long, very long, and drove many good men out of the profession. And now look at the wonderful change worked in a short time by the force of organization and co-operation. Good physicians are now counted by the hundreds, and they form a strong body, well able and always ready to fight the good battle of science against quackery and superstition. Even in the State Legislature we have succeeded in obtaining a law regulating the practice of medicine, and achieved a triumph which has not been obtained in other States.

Many members of this Association have distinguished themselves in practice, and many have written creditable treatises on different subjects. It is true we cannot boast of great medical discoveries or meteor-like theories advanced by members of this Association. But let us have all the advantages which our more fortunate brethren in the older States possess. Let us have hospitals, libraries, laboratories, and museums, and it will not be long before we may enter the arena and win the prize.

One thing is certain, we have attempted and achieved, in Texas, everything that was attempted and achieved by others before us. Our reports show that there is no difficult case in medicine, no capital operation, no feat in obstetrics and gynæcology, which has not been successfully mastered by one or another of this Association. Texas is inferior to none in scientific zeal, and superior to many in brotherly feeling existing between its members.

Gentlemen, this is our first meeting west of the Colorado. Let us hail it as a pledge of the good feeling between the two great sections of our beloved State.

In sight of the venerable ruins of the Alamo, which were won and defended by men from the Red River as well as the Rio Grande, let us remember that

Union is strength in science as well as in politics. Let us keep together a strong and unbroken front; and let us hope that at our next meeting no friendly face may be missing and no friendly voice may be hushed in eternal silence.

Dr. W. D. Kelley, the President, replied, thanking Dr. Herff, for the courteous reception of the Association.

On motion, the minutes of the last meeting were dispensed with.

The Secretary presented the following applications for permanent membership: Drs. Edward Bennett, V. Forschhammer Smith Buford, W. H. Montgomery, Amos Greves, F. Paschal, C. V. Weller, B. F. Brittain, T. R. Chew, Arthur E. Spohn, R. T. Knox, A. D. Paulus, W. W. Walker, John A. Herff, Charles A. Bonner, J. W. Wadsworth.

Delegates from County Societies: Dr. T. M. Blakemore, Hays County Medical Society; Dr. J. H. Pope, Harrison County Medical Society; Drs. A. D. Paulus, W. W. Walker, J. C. B. Renfro, R. A. McKinney, Fayette County Medical Society; Drs. George W. Christian and C. O. Weller, Colorado County Medical Society; Drs. J. J. Ganslen, T. R. Chew and Theodore Herrmann, Western Texas Medical Association; Drs. T. D. Manning, R. H. L. Bibb, A. E. Carothers and L. D. Wooten, Travis County Medical Society.

Communications were received from Drs. Gaillard and Yandell, Louisville, Ky.; Schuppert, Richardson, Chaillé, Logan and Brickell, New Orleans; Gross, Philadelphia; and Bower of St. Louis.

Prof. Chaillé, delegate from the Louisiana State Medical Association, presents with his correspondence a paper, "Origin and Progress of Medical Jurisprudence from 1776–1876;" a "Centennial Address;" a reprint from the Transactions of the American Medical Association; also, "The American Mountain Sanitarium for Consumption."

Prof. Brickell through Prof. Chaillé presents (with regards)

a paper, extracted from the "*American Journal of the Medical Sciences* for April, 1877, "The Proper Treatment of Pelvic Effusions."

Prof. L. P. Yandell, a paper—"Malaria and Struma, their relation to the Etiology of Skin Diseases"—read before the Dermatological Association, at Niagara Falls, September, 1877, reprinted from the *American Practitioner*, January, 1878.

Prof. Joseph Jones presented papers—"Compulsory Vaccination." "The Establishment of a Uniform System of Vaccination for all Citizens and Inhabitants of the State of Louisiana, by Legislative Enactment." "Spontaneous Combustion." "Poisonous Effects of Cyanide of Potassium." "Observations on the African Yaws (Framboesia) Rubula, Pian, Epian, Syphilis Æthiopica, Syphilis vel Lues Æthiopica, Syphilis Africana; and on Leprosy (Lepra Tuberculosa, Lepra Hæbræorum, Lepra Ægyptica, Lepra Leontina, Lepra Arabum) in Insular and Continental America. Also, "Andersonville, — the Relations of the Confederate Government to Federal Prisoners—Letter of Joseph Jones, M. D., of New Orleans, to Hon. B. H. Hill, and Letter of Gen. R. E. Lee on Federal and Confederate Prisons." Also, "Animal Vaccination;—Remarkable Progress of the New Method. Enlargement of Facilities." Also, Vol. I, "Medical and Surgical Memoirs."

J. D. Rankin, M. D., presents, "Lecture on Cerebro-Spinal Meningitis."

Prof. Chaillé presents also, (omitted above) "Prof. Elliott's Address at the Commencement Exercises Medical Department University of Louisiana, March 21, 1878, with Names of the Alumni of the University from 1872 to present year inclusive." "The Medical Colleges, the Medical Profession, and the Public." "Intimidation, and the Number of White and Colored Voters in Louisiana in 1876, as shown by Statistical Data, derived from Republican Official Reports."

We hail with pleasure the organization of the Louisiana State Medical Association as referred to by Prof. Chaillé.

Telegram from Prof. Schuppert, wishing the Texas State Medical Association continued success.

Dr. Charles Ganahl, Chairman of the Section on Jurisprudence, Chemistry and Psychology, writes, declining to report on account of continued ill-health.

Resolution by Dr. Heard:

Resolved, That a committee of five on Constitution and By-Laws be appointed by the Chair to examine into any changes that may be necessary for the greater perfection in our plan of organization, to report during the present session.

On motion, the resolution was referred to the Judicial Committee.

Resolution by Dr. Heard:

Resolved, That we recommend and urge upon our Senators and Representatives in Congress, the passage of the bill now pending before that body, entitled, "A bill to prevent the introduction of infectious diseases into the United States," the object of which is to establish a national system of Quarantine.

Resolved, That the plan or system of Quarantine contemplated in the bill, embracing in its provisions as it does, a central bureau and head officers charged with its administration, who are in constant communication with its head and with each other, and furnished with the earliest and most reliable information from the consular agents of the Government, of the state of health of localities where yellow fever ordinarily prevails, that such a plan furnishes in our judgment the most effective system of Quarantine, and that best calculated to secure the protection to the public health against the introduction of yellow fever and other infectious diseases, and at the same time to impose the least restriction upon commercial intercourse compatible with security from such diseases.

Referred to the Committee on Health.

The Judicial Committee reports favorably on the applications for permanent membership as above recorded, with one exception, that of Dr. J. W. Wadsworth, which is returned for vouchers.

The Council reports favorably also upon credentials of delegates and Medical Societies.

Attest: J. R. ROBERTSON, M. D.

A. E. CAROTHERS, M. D. Chairman Judicial Council.

Report adopted.

Adjourned until 3 o'clock P. M.

AFTERNOON SESSION—3 O'CLOCK P. M.

President Dr. Kelley in the chair.

Minutes of the morning session read and adopted.

Dr. A. R. Kilpatrick, Chairman of the Section on State Medicine and Public Hygiene, announced his readiness to report. He read a long and interesting report, giving a brief history of census-taking and its importance; spoke of the origin of Quarantine and of Hospitals. Near about the end of the fifteenth century the Republic of Venice established the first Board of Health. In 1504, this "Council of Health" was invested with the power of life and death, and there was no appeal from their sentence. The first quarantine law of this country was commenced in 1700, on account of an epidemic of yellow fever in Philadelphia, in 1699. He urged that the people should be instructed in hygiene, and in reference to the nature and causes of diseases; states the epidemics of yellow fever that have swept over the State of Texas. That the loss by the epidemic of 1867, to Navasota alone, was not far from $500,000. Said compulsory vaccination should be urged as a democratic measure.

On motion of Dr. Dowell, the report was referred to the Committee on Publication.

Dr. Sears presented a paper, "Metastasis of Vaccinia," which gave rise to some discussion, and on motion of Dr. Blakemore, was referred to the Section on Practice.

Adjourned until 9 A. M. to-morrow.

SECOND DAY—MORNING SESSION.

WEDNESDAY, April 3, 1878.

Association met at 9:30 A. M.

Minutes of the previous day read and approved.

The President said it was the hour for Dr. Heard to read his paper, whereupon Dr. Pope, by request of Dr. Heard, presented and read an interesting "Resume of Materia Medica and Therapeutics."

On motion of Dr. Park, Dr. Heard's paper was referred to the Publishing Committee.

Dr. Wooten read his paper "On Surgery and Anatomy," giving a full synopsis of the progress made to date.

Dr. Sears presented and read his paper on "Climatology and Epidemics."

On motion, the papers of Drs. Wooten and Sears were referred to the Publishing Committee.

The following names for permanent membership were presented, and, there being no objections raised, they were duly elected upon recommendation of the Judicial Council: Wm. B. VanDuyn, R. Menger, J. H. W. McMahon, Wm. M. Scallon, J. C. Watts, J. S. Bruce, J. Van Gasken and C. H. Wilkinson.

The following delegates from County Societies were also received:

Drs. Daniel Parker and John McLendon, representing Robertson County Medical Society.

Dr. E. Randall, representing Galveston County Medical Society.

Drs. A. D. Paulus and W. W. Walker offered the following resolution:

Resolved, That the dues of Dr. R. B. Thomas, of Flatonia, and a member of this Association, for the ensuing year, be remitted on account of the severe injury he has received.

Carried unanimously.

Dr. Harrison offered the following preamble and resolution:

WHEREAS, It is the custom in the administration of our State laws to deny to physicians any compensation for their testimony as "experts," holding them as obliged to render professional testimony upon the same terms as are accorded to ordinary witnesses; and

WHEREAS, This custom is not only palpably unjust in that it appropriates the time, labor and skill of members of our profession without rendering an equivalent in compensation for such service, but is equally contrary to the organic law of the land, as has been decreed by the Supreme Courts of two or more States of the Union; therefore, be it

Resolved, That this Association recommend to its members, and to members of the profession generally, the propriety of declining to render any such service in future without an adequate fee, leaving the question of the ethics involved in the practice to be discussed on a future occasion.

Resolution adopted.

Letter from Dr. Hilary Ryan, Caldwell:

"*Gentlemen of the Texas State Medical Association:*

"Important business prevents me from meeting with you. I therefore request the Association to take such action as it may think best asking Congress to take the duty off quinine.

"I would also invite your attention to an article which appeared in the March No. of the *Richmond and Louisville Medical Journal*, page 281—"Proceedings of the Hot Springs and Garland County Medical Society," in which two physicians furnished a secular paper their autobiographies and pictures. Although this is out of our jurisdiction, I would respectfully suggest that a resolution be passed censuring such conduct. "Respectfully,

"HILARY RYAN."

Dr. C. Sams, Recording Secretary, reported proceedings, members and financial condition of Waco Medical Society.

Resolution by Dr. Wooten:

Resolved, 1st. That a committee of three be appointed by the Association, whose duty it shall be to memorialize the next Legislature, and take such active steps as may be required to obtain the establishment of a Board of Health, and the enactment of such other laws as may be deemed necessary for the better protection of the public health.

Resolved, 2d. That said committee shall furnish to the Legislature such data and knowledge as may be necessary to secure the proper legislation on the subject.

Resolved, 3d. That every member of the Association exercise his influence in the furtherance of the above sanitary and hygienic measure, by directing public attention to the importance of such legislation, and the public benefit to be derived therefrom.

Resolution adopted.

Dr. H. A. West, Secretary Galveston County Medical Society, presents a list of officers and members of the society, with a brief abstract of proceedings during the past year. Also a copy of the Mortuary Report of Dr. Wilkinson, late Health Officer of the city of Galveston.

Dr. Hadra presented a paper, read at his request by Dr. Bibb, "Hepatic Dysentery, with Symptoms of Abscess." Dr. Hadra presented his patient to the Association, and gave a full history of the case.

On motion, Dr. Hadra's paper was referred to the Committee on Publication.

Dr. Cupples,* from the Section on Surgery, presented and read his report.

Dr. Carothers said that, although he was chairman of the Section on Surgery, he disclaimed the credit of any part of the work, as Dr. Cupples had been the main actor in the work; and in justice to Dr. Cupples he called the attention of the Association to the fact.

Dr. Sears presented and read a report on "Climatology and Epidemics."

Dr. David Park presented a paper—"Facts and Conclusions in Regard to the Calvert Epidemic in 1873," read before the Robertson County Medical Association.

Both papers were referred.

Adjourned until 3 P. M.

AFTERNOON SESSION—3 O'CLOCK P. M.

Dr. Kelley, President, in the chair.

Reading of the minutes of morning session omitted.

The President said the regular order of business must necessarily be dispensed with for the present.

* It was thought best, by the Committee on Publication, to publish the very able Report of the Committee on Surgery separate from the Transactions.

Dr. Pope presented the following, which was adopted:

Resolved, That the Secretary be directed to telegraph to the Kentucky State Medical Society, now in session, the fraternal good wishes of the Texas State Medical Association, and express our sympathy for the loss of their venerable President, whose death we deplore only less than they can.

The Judicial Council reported as follows:

The list of Medical Societies and applications for permanent membership referred to the Council by the Association have been acted upon and recommended.

A communication being before us from the Waco Medical Association, protesting against the change of the annual dues from 25 cents to $1 per capita from County Societies, we recommend that the by-laws be so amended as to reduce the annual dues from members of auxiliary subordinate societies to 50 cents per capita.

The application of Dr. W. H. Dial, for permanent membership, referred to the Council at the last annual meeting, has been duly considered, and we present the following resolution:

Resolved, That the application of W. H. Dial for permanent membership in the State Medical Association, being opposed by the Medical Society of Harrison County, where he resides, as appears from a certified extract from the minutes of said society, which has been submitted to us, cannot therefore be entertained.

Resolved, That the words, "except in cases involving censure or expulsion of a member," be inserted after the word "final," in the fourth line of the third paragraph of the By-Laws defining the duties of the Judicial Council.

Resolved, That Art. 9 of the By-Laws be amended by the addition of the following words, "That the Nominating Committee shall submit to the Association the three names receiving the highest number of votes in this body for each office."

Resolved, That we recommend that the 7th Article of the Constitution be amended by striking out the seventh, eighth and ninth lines, and substituting the following words: "And each permanent member of the Association shall be entitled to vote in right of his membership upon all questions, including elections."

J. B. ROBERTSON, M. D.,
Chairman Judicial Council.

Attest:
A. E. CAROTHERS, M. D. Secretary.

Report received and adopted.

Dr. Renfro read papers, to wit: "Extra Uterine Fœtation," "Abnormal Labor," and "Uterine Fibroid Polypus."

Dr. Bibb reported cases: "False Sacculated Aneurism, involving the posterior right aspect of the Arch of the Aorta," and "Strangulated Inguinal Hernia, with operation and recovery."

The papers of Drs. Renfro and Bibb were referred to the Committee on Publication.

Dr. Cupples, as announced this morning, now gave an analysis of his report, accompanied by statistics—a most interesting and instructive paper. A vote of thanks was extended the Committee, and to Dr. Cupples particularly. His papers were ordered to the Publishing Committee.

Dr. M. K. Taylor, of the United States Medical Department of San Antonio, was introduced to the Convention, and made a brief lecture on the uses of carbolic acid in the treatment of inflamed lymphatic glands.

On motion, a vote of thanks was extended Dr. Taylor.

Dr. Renfro reported a case of inflamed mammary gland, which yielded promptly to the carbolic acid treatment.

Resolution by Dr. Heard:

Resolved, That the Nominating Committee meet at once, to-morrow morning, and make all the nominations for the ensuing year.

Adopted.

Dr. Dowell made some remarks in connection with the Section on Surgery; explained also his treatment for hemorrhoids.

10:30 A. M. to-morrow set apart to Drs. Wooten, Park and Dowell.

Adjourned until 9 A. M., Thursday.

THIRD DAY.

THURSDAY, April 4th, 1878.

Association met pursuant to adjournment.

Dr. Kelley, President, in the chair.

After roll-call, on motion, the minutes of yesterday were read and adopted.

Dr. Kelley introduced Prof. Chaillé of New Orleans

Prof. Chaillé in response addressed the Association in some brief remarks, and thanked the Association for the cordial greeting given him.

Dr. Wooten presented and read his paper on Surgery as announced on yesterday.

Referred to the Committee on Publication.

Dr. Park read his paper, "Vesico-Vaginal Fistula." Also, "Amputation of the Arm at Shoulder, and Amputation of both Legs;—recovery." By J. T. Field, M. D., of Fort Worth.

Both papers referred to Committee on Publication.

Dr. Dowell presented and read his paper as announced on yesterday.

Referred to Committee on Publication.

Telegram received from the Mississippi State Medical Association now in session, to Wirt Johnson, M. D., Secretary greeting the Texas State Medical Association.

Resolution by Dr. C. O. Weller:

Resolved, That a special committee of three be appointed by the Chair to draw up and present a memorial to the Sixteenth Legislature of the State of Texas, requesting in behalf of this Association, the repeal of the law imposing an occupation tax on Physicians and Surgeons.

Dr. Pope presented surgical papers of much interest: "Lacerated and Contused Wound of Leg, which necessitated Secondary Amputation of Thigh;" "Traumatic Erysipelas;" "Secondary Hemorrhage;" "Tetanus with recovery."

Referred to the Committee on Publication.

An invitation was received and read from Grayson County Medical Society to hold next annual meeting at Sherman.

Obituary notices were presented of Drs. C. H. Jager, John Jones and Levi North.

Dr. Carothers presented and read a paper on "Anesthetics."

Dr. Bibb for Dr. Ryan, presented the following resolution:

WHEREAS, It is the sense of this Association that the duty on Quinine should be abolished, therefore, be it

Resolved, That the President of the Association be, and is hereby requested to appoint a committee of three to petition our representatives in Congress and the Senate of the United States, to use their influence in abolishing the import duty upon this drug.

Carried.

The President appointed as the Committee, Drs. Heard, Welch and Wilkinson, of Galveston.

By Drs. Pope and Chew:

Resolved, 1. That County Societies be requested to furnish a complete list of all the practitioners of medicine, both regular and irregular, in their respective counties, and arranged in the following classes:

1st. Recognized by the regular profession, stating if members of local society.

2d. Notorious quacks.

3d. Doubtful.

Resolved, 2. That in counties having no local society, the President of this Association, assisted by the Secretary be requested to select some physician in good standing to furnish the desired information.

Resolved, 3. That the Secretary of this Association shall keep a book, in which the names so obtained shall be recorded in alphabetical order, by counties. Said book shall be known as the "Register of Physicians in the State of Texas."

Resolved, 4. That this Register shall be revised once annually, in order to preserve it as a reliable Register.

Amendment as offered by Dr. Sanders, "and report place of graduation."

Resolutions as amended were adopted.

Dr. Park suggested the propriety of going on with the business of the Association this afternoon, and not visit the springs in response to an invitation given yesterday, as many of the members would have to leave on Friday.

By Dr. Robertson:

Resolved, That the Section on "Hygiene and Public Health," be requested to take into consideration the propriety ef recommending to the authorities of towns and cities the adoption of some general rules for the construction of buildings on principles and plans in accordance with the proper rules for the prevention of disease, and preservation of health, to report at the next session.

Adopted.

The President appointed as said committee: Dr. Robertson. Chairman, Washington County; Dr. Taylor, Austin; Dr. Park, Tyler.

By Dr. Sears:

Resolved, That the Committee on Climatology and Epidemics consist of one member from each judicial district, and that each of the several committeemen from or of the districts, correspond with physicians in each county of such district, and each district report to the chairman in a condensed and well digested paper for his final report.

Adopted.

The President appointed the following gentlemen in accordance with the above resolution: 1st Judicial District, no member in this District; 2d, Dr. F. H. Johnson, Marshall; 3d, Dr. F. M. Colley, Palestine; 4th, Dr. Joseph N. Baylor, Navasota; 5th, Dr. R. De Jernett, Jefferson; 6th, Dr. W. E. Saunders, Sherman; 7th, Dr. W. H. Park, Tyler; 8th, Dr. H. H. Beck, Sulphur Springs; 9th, Dr. D. A. Jameson, Millicon; 10th, Dr. E. J. Beall, Fort Worth; 11th, Dr. A. A. Johnston, Dallas; 12th, Dr. E. G. Nicholson, Hamilton; 13th, Dr. S. F. Starley, Corsicana; 14th, Dr. T. E. Underwood, Waco; 15th, Dr. J. C. B. Renfro, Lagrange; 16th, Dr. W. J. Burt, Austin; 17th, Dr. J. A. Huling, Lampasas; 18th, Dr. O. H. Seeds, Columbia; 19th, Dr. R. H. Harrison, Columbus; 20th, no member in this District; 21st, Dr. J. L. Irion, Montgomery; 22d, Dr. F. Herff, San Antonio; 23d, no member in this District; 24th, Dr. J. P. Schele, New Braunfels; 25th, no member in this District; 26th, Dr. C. H. Wilkinson, Galveston; 27th, Dr. W. A. Bell, Farmersville.

By Dr. Cupples:

Resolved, That Prof. Chaillé be requested to deliver an address to-morrow morning, on such subject, and at the hour as may suit his convenience.

Adopted.

REPORT OF NOMINATING COMMITTEE.

Your Committee report as follows:

For President—Dr. Geo. Cupples, San Antonio; Dr. L. D. Wooten, Austin; Dr. M. A. Taylor, Austin.

For 1st Vice President—Dr. R. W. White, Waco; Dr. S. M. Welch, Galveston; Dr. A. R. Kilpatrick, Navasota.

For 2d Vice President—Dr. W. E. Sanders, Sherman; Dr. John H. Pope, Marshall; Dr. W. H. Park, Tyler.

For 3d Vice President—Dr. J. T. Field, Fort Worth; Dr. W. H. Park, Tyler; Dr. R. W. White, Waco.

For Judicial Council—Dr. T. R. Chew, San Antonio; Dr. R. W. White, Waco; Dr. W. E. Sanders, Sherman; Dr. W. D. Kelly, Galveston; Dr. A. W. Acheson, Denison; Dr. E. Randall, Galveston; Dr. J. C. Jones, Gonzales.

Chairman of Committee on Publication—Dr. T. R. Chew, San Antonio.

Committee on Prize Essays—Dr. S. M. Welch, Galveston; Dr. D. F. Stuart, Houston; Dr. J. S. Burroughs, Houston; Dr. T. J. Heard, Galveston; Dr. W. D. Kelley, Galveston.

Resolved, That the Secretary of the Association be authorized to name the Committee on Necrology.

Section on Practice—Dr. W. J. Burt, Austin, Chairman; Dr. R. H. L. Bibb, Austin, Secretary.

Section on Obstetrics—Dr. E. Herff, San Antonio, Chairman; Dr. J. J. Ganslin, San Antonio, Secretary.

Section on Surgery and Anatomy—Dr. S. Eagon, Sherman, Chairman; Dr. A. Acheson, Denison, Secretary.

Section on Medical Jurisprudence—Dr. S. R. Burroughs, Grey's Station, Leon County, Chairman; Dr. Thos. M. Colley, Palestine, Secretary.

Section on State Medicine and Hygiene—Dr. A. R. Kilpatrick, Chairman, Navasota; Dr. Joe. S. Willis, Secretary, Waco.

For Place of the Eleventh Annual Meeting—Sherman, Waco, Brenham.

Time of Eleventh Annual Meeting—The first Tuesday in April, 1879.

RESULT OF THE ELECTION OF OFFICERS, ETC.

Dr. Wooten asked that his name be withdrawn. Dr. Taylor asked also that his name be withdrawn. Whereupon, on motion of Dr. Wooten, Dr. Cupples was unanimously elected President.

For 1st Vice President—Dr. Welch asked that his name be withdrawn. There being but two in nomination, the vote resulted thus:

Dr. R. W. White	41
Dr. A. R. Kilpatrick	15

Dr. White was declared duly elected 1st Vice President.

For 2d Vice President—Drs. Pope and Park declined to be placed in nomination, and Dr. Saunders was elected by acclamation.

For 3d Vice President—Dr. White being already declared 1st Vice President, and Dr. Park declining to act, Dr. Field was elected by acclamation.

Drs. Chew, White, Sanders, Kelley, Acheson, Randall and Jones were elected as the Judicial Council.

Chairman of Publication—Dr. Chew was declared elected.

For place of next meeting—

Sherman	43
Waco	1
Brenham	35

Sherman was therefore elected as the place for the eleventh annual session. Time, the 1st Tuesday in April, 1879.

Adjourned until 3 P. M.

AFTERNOON SESSION—3 O'CLOCK P. M.

The Association met as per adjournment, Dr. Cupples in the chair.

Minutes of the morning session dispensed with.

Dr. Harrison offered the following resolution:

Resolved, That the Chair appoint a committee of three to consider and report to the next session of the Association, as to the propriety of establishing an Association journal of the medical sciences, in which the minutes of the Association, and the proceedings of such County and District Associations, or abstracts thereof, and contributions therefrom, as may be desirable, shall be published in lieu of our annual volume of transactions.

Adopted.

Dr. Dowell offered the following resolution:

Resolved, That this Association ask the Legislature to establish, at an early day, an asylum for the care and treatment of confirmed inebriates.

Amended by Dr. Robertson:

That we respectfully recommend to the Legislature the importance of establishing an asylum, at an early day, for the care and treatment of confirmed inebriates.

Adopted as amended.

Your Committeee, to whom was referred the framing rules of business on yesterday, beg leave to report:

We recommend the adoption of the following "Order of Business":

1. Roll Call.
2. Reading of minutes of previous meeting.
3. Report of Committee of Arrangements.
4. Reception of applications for membership.
5. Reception of Communications.
6. Report of Special Committees.
7. Report of Standing Committees.
8. Reports of Officers.
9. Unfinished Business.
10. Reports of Sections.
11. New Business.
12. Adjournment.

RULE 1.—Reception of Applications for Membership, and Reports of Judicial Council shall be considered as privileged questions, and may be brought before the house at any time before the morning session, after the Report of the Committee of Arrangements.

RULE 2.—No member shall speak longer than five minutes at a time, nor more than five minutes on any pending motion, without the consent of the house.

We further recommend the continuance of the committee, to report at the next meeting.

G. DOWELL,
A. E. CAROTHERS,
JNO. H. POPE.

Rules adopted and committee continued.

Adjourned until 8 P. M.

EVENING SESSION—8 O'CLOCK, P. M.

Association met at 8 P. M., house called to order by Dr. Cupples.

Dr. Kelley, the retiring President, delivered the annual address to an appreciative audience of ladies and gentlemen of the city, and members of the profession. Subject: "General Advances in Medical Science and the Profession."

The address was eminently practical, manfully outspoken, and attracted profound attention.

On motion, Dr. Kelley's address was referred to the Committee on Publication and ordered to be printed in the Transactions of the Tenth Annual Session.

Adjourned.

FOURTH DAY.

APRIL 5th, 1878.

Association met at 9 A. M., President Cupples in the Chair.

Prayer by Bishop Elliott.

Roll Call and Minutes dispensed with.

Dr. Pope, Chairman of Publishing Committee, made his report.

Dr. Larendon, Treasurer, made his report.

Dr. East, Secretary, made his report.

On motion, the reports were received and adopted.

Applications for permanent membership from Drs. J. J. Gaenslen and Theodore Herrmann were presented, and no objections being raised, the applicants were declared permanent members.

By Dr. Dowell:

WHEREAS, It is well known that there is in the minds of many persons a great prejudice against dissection and post mortem examination, and that in some instances doctors and medical students have been prosecuted for making dissections and preparing skeletons under our present law; therefore be it

Resolved, That we recommend that the members of this Association refuse to give certificates of death until such privilege is granted. And that such a law be prepared as to enforce this in all public hospitals and institutions of a charitable character.

Referred to the Committee on Legislation.

By Dr. Robertson:

Resolved, That the Publishing Committeee be instructed to correspond with the various subordinate societies, from year to year, and ascertain how many copies of the Transactions of this Association will be purchased by the members of said societies, at actual cost of publication—the annual dues paid by the members of the local societies to be allowed as a credit on the said actual cost.

Adopted.

By Dr. Heard:

Resolved, That the President address some prominent physician in every county not now represented in this Association, urging the *necessity* of prompt organization of county societies.

Adopted.

The hour allotted to Prof. Chaillé having arrived, he proceeded to address the Association on many interesting and important subjects, which elicited unbroken attention throughout his discourse.

On motion of Dr. Robertson, seconded by Dr. Gaenslen, a vote of thanks was extended to Prof. Chaillé for his able address.

Resolved, That the Texas State Medical Association return their sincere thanks to the officers of Railroads, to the Committee of Arrangements, and to the citizens of San Antonio, for the many courtesies extended.

Dr. A. K. Ramsey, Secretary of Bell County Medical Association, reports organization, members, and abstract of papers

read before the Society. Delegates to Texas State Medical Association, M. K. Lott, M. D., and T. S. Russell, M. D.

Dr. Russell, on invitation, gave a statement of his treatment by a mob in Bell County.

On motion of Dr. Hadra, it was

Resolved, That the Association express its admiration of Dr. Russell's gallant fight in defending the freedom of thought and speech against the brutal efforts of intolerance.

Resolution carried.

REPORT ON OBITUARIES.

Dr. C. H. Jaeger was born in the City of Leipzig, Kingdom of Saxony, on the 9th day of August, A. D., 1806; graduated at the University of Leipzic 1830, and came to Texas in 1835. Served at the battle of San Jacinto 1836, Died in the City of Galveston on the 15th day of October, 1863, aged 57 years and 6 days.

Dr. John Johns, of Burleson County, aged 66 years. Died of paralysis. He was a good physician, and an excellent gentleman, and adorned the Christian and Medical character well. He was a great loss to the people among whom he lived.

There being no other business, the Association adjourned, to meet as heretofore stated.

GEORGE CUPPLES, M. D.
Pres't Tex. St. Med. Ass'n.

W. A. EAST, M. D.,
Sec'y Tex. St. Med. Ass'n.

NOTE.—The names of the members of the Committee appointed to consider the propriety of establishing an Association journal, do not appear in the copy of the Minutes furnished by the Secretary.

(Signed.) T R. CHEW.

SECRETARY'S REPORT.

Mr. President and Gentlemen of the Association:

I herewith present my report, commencing from the adjournment at Galveston, April 1877, to the adjournment at San Antonio, April 1878. The usual routine duties incumbent upon me have been strictly observed.

Your Secretary received of Dr. John C. Jones, of Gonzales, for membership and dues, from the organization of the Association to April 1868	$32.50
From Dr. S. W. Field, Fort Worth, for dues to April 1877	10.00
From Dr. A. A. De Jernette, Jefferson, for dues to 1877	5.00
For sale of two copies of Transactions for 1877	3.00
Amount received	$50.50

DISBURSEMENTS.

For paper, envelopes, postal cards, postage, pens and ink during the year	$18.80
For freight on 70 Transactions, sent to me by Dr. Jno. H. Pope, Chairman of the Publishing Committee	2.20
For distribution 68 Transactions per mail, 13c each	8.84
For envelopes and stamps	1.96
For printing	5.00
For three telegrams	3.00
Amount paid out	$39.80

Deduct from amount received, $50. 50, and we have a balance due the Association of $10.70, which amount I have paid to your Treasurer and hold his receipt for the same.

Your Secretary, during the year, declined to answer several letters asking for our Rules, from the fact that the parties were prepared to subscribe to our Constitution and By-Laws.

About the middle of September last, a letter was received from Austin Flint, Jr., M. D., asking upon what terms the Association would publish in its Transactions the card of Bellevue Medical College, New York. Having no authority to negotiate, I turn Dr. Flint's letter over to Dr. T. R. Chew, Chairman of the Publishing Committee.

Respectfully submitted,

W. A. East, M. D., Sec'y Tex. St. Med. Ass'n.

TREASURER'S REPORT.

To the President and Members of the Texas State Medical Association:

GENTLEMEN—Your Treasurer reports the following receipts and disbursements of cash for the year ending April 3d, 1878:

April 4, 1877—	Balance on hand as per last Report	$ 76.78
	Received from members and local societies, fees and annual dues	629.75
	Total on hand and collected	$706.53

DISBURSEMENTS.

April 5, 1877—	Paid W. A. East, Secretary's salary	$200.00
	" " on Expense account	14.50
April 7,	" R. H. Harrison, cash advanced	55.75
	" Freight on Transactions to Galveston	2.00
	" Freight and drayage on Transactions to Galveston	1.25
	" For envelopes and stamps	5.50
July 13,	" Wm. Sheeley, Hallettsville	3.00
Aug. 4,	" J. H. Pope, Chairman Publishing Committee	400.00
	Total disbursements	$682.00

RECAPITULATION.

Total amount received	$706.53
Total amount paid out	682.00
Balance on hand	$ 24.53

Respectfully submitted.

J. LARENDON, Treasurer T. S. M. A.

SAN ANTONIO, Texas, April 4th, 1878.

REPORT OF COMMITTEE ON PUBLISHING, FINANCE AND CLAIMS.

Mr. President and Gentlemen:

Your Committee on Publishing, Finance and Claims begs leave to report as follows:

A mass of manuscript was turned over to us, out of which we were expected to make a book. We confess to a sense of disappointment in the material we had to work with. If a rigid rule were observed, no Transactions would be published, save the Minutes and one or two contributions.

The new plan of organization makes the Sections the judges of the propriety of publishing papers. This, all will agree, is a long step in the right direction. During the last session the Association was not working under this plan, so we had only precedent to guide us. After much painfully anxious reflection, that no one can appreciate that has not been similarly situated, we finally concluded to publish the work as it has come to you, feeling all the while that we were doing something that had to be apologized for. Five hundred copies of the Transactions of the Ninth Annual Session have been published at a cost of $385. Bids for the publishing were received from several houses. Messrs. Jennings Bros.. of Marshall, being the lowest responsible bidders, were awarded the contract at $1.50 per page. The volume was ready for distribution to members early in September. A copy was mailed to each name furnished by the Secretary and Treasurer. Several extra copies were forwarded to the outgoing and incumbent Presidents. Seventy copies were furnished to the Secretary to supply his wants for exchange, etc. Some of the medical journals and prominent physicians of the United States were supplied with a number.

Money received and disbursed under the auspices of the Committee is shown by the following account:

RECEIPTS.

From Dr. Bibb, on account of "1876" advertisement	$ 5.00
" Treasurer Larendon, per draft	400.00
" Treasurer Larendon, per dues of members (Harrison Co. Medical Association	20.00
" Dr. S. F. Starley, postage stamps	.06
Total receipts from all sources	$425.06

DISBURSEMENTS.

Paid for postal cards, 50c; postage stamps, $1.95	$ 1.05
Express on Transactions, 30c; 1 quire paper, 40c	.90
Telegram to Dr. Harrison, 75c; answer to same, 50c	1.75
Telegram to Dr. Manning, 75c; errand boy, 25c	1.00
Express on Dr. Manning's article, 50c; exchange on draft, $1	1.50
Paid Jennings Bros. for publishing Transactions, wrapping paper and cards	385.00
Postage on Transactions Ninth Annual Session	36.00
Balance postage on Transactions Eighth Annual Session	12.00
Total expenditures	$439.70
Total receipts	425.06
Balance	$ 14.64

Fifteen dollars are still due on account of unpaid advertisements published in Transactions of Eighth Annual Session.

Of the amounts advanced by members there are still remaining small unpaid balances. All other debts of the Association are paid, and the Treasurer's Report shows a balance on hand of $24.53.

All of which is respectfully submitted.

JOHN H. POPE, Chairman of Committee.

DOCTOR KELLEY'S ADDRESS.

Gentlemen of the Texas State Medical Association:

We have assembled in this beautiful City of San Antonio to celebrate the return of the day of our annual meeting, and it is my pleasing duty to congratulate you, that so much has been done, in the language of the Constitution, "to organize the medical profession of the State, to encourage a high standard of professional qualification and ethics, and to promote professional brotherhood." Ten years ago, about thirty medical men assembled in the City of Houston and organized the Texas State Medical Association. To-day more than two hundred and sixty names stand on our rolls, representing a large number of counties and cities, and embracing much of the best talent and most conspicuous members of our noble profession. Local organizations, too, have come into existence in very many places, and are now actively engaged in elevating the standard of our profession, and binding it in a band of brotherhood throughout the State.

Let us hope that the physicians of every county and city will speedily organize, and not one will be unrepresented in this Association one year hence. Can any one doubt that this should be done? Who believes, or would assert, that the status of medical men has not been elevated; that purity and a just sense of honor, personal and professional, has not been enhanced, and that every acquirement which adorns private and public life has not received a marked impetus by the organization of the State Medical Association and our annual meetings? Socially we have been knit together as with "hooks of steel," from the Sabine to the Rio Grande, from the Gulf to the

Llano Estacado, and already a hearty welcome and recognition come from many States of the Union to cheer and encourage us. Ten years ago not one city or town of Texas had representation and a voice in the grand parent Association of the nation. How is it to-day? Upon the roll of her Vice Presidents stands the name of our first President, and very many of the most distinguished names that foster, nourish, protect and give honor to us at home are among its members. Is this nothing to have done? Are there no responses from patriotic hearts, those who love the lone-star State, when they hear that all the grand strides she has made in population and aggregate wealth, all the distinction she has won in the councils of the nation, all the chivalric deeds of her sons in war and peace, all the advances she has made toward a higher civilization, have been steadily rivaled by the undaunted courage and determined progress of her medical men? Gentlemen, we stand on holy ground. In this beautiful and most hospitable city was erected near two hundred years ago, the banner of the cross, and yonder beautiful ruins are the symbols of the earliest Christianity ever planted in our State.

Let us hope the cross and the crown have been united. Crockett, Bowie and Travis died here, and one hundred and fifty other as brave souls as ever passed, we trust, from earth to heaven, had swift dispatch to the unknown shore. They died, gentlemen, for liberty and country, and strange though it be, no surgeon was there to bind one mortal wound. "Thermopylæ had her messenger of defeat; the Alamo had none." No brave heart beat when that dread day was passed. Peace to their ashes; immortal honor to their names.

What I should say to you on this occasion has been a matter of much thought and anxiety, and I do not know if I can do better than call to your attention living examples, chiefly, of illustrious names, for your encouragement, and in vindication of the truth and nobility of our science, so often aspersed and

contemned by the ignorant. Before, however, passing to this, it is meet that I should dwell very briefly upon some topics of local and State importance.

Several efforts have been made by this Association to obtain legislative enactments for the conservation of the dignity and purity of the medical profession, and after much annoyance your committee succeeded in having passed the present law as the best that could be obtained at that time. Dr. Wooten very clearly and forcibly set before you the changes made, and what had been gained by its enactment, stating it as his belief that if duly executed it will operate to the protection and safety of the public. With its defects all are acquainted, and it remains for this Association to suggest any improvements or changes that should be made.

The value of a State Board of Health, organized under wise provisions of law, has been a subject of deep interest to this body, but as yet our legislators have viewed it differently, or have rested in listless and criminal indifference. The power of organizations, under state or municipal authority, whether quarantine or sanitary, to protect the life of the citizen, is so manifest that I do not pause to discuss it. One difficulty, of an almost insurmountable character in free governments, lies in their enforcement. The liberty of the citizen but too often degenerates into license, and is allowed to become at times absolutely destructive of the public safety. A better and wiser public sentiment would greatly aid in the enforcement of such laws, and the method by which this could be reached must lie in a fuller knowledge of preventable disease imparted. Let the laws of hygiene be taught in our best schools by competent teachers; instruct the public; teach them the value of the law and they will obey it. The road to this must lie through wiser and better enactments—those that bear equally upon all classes of citizens, whether municipal or otherwise; and I venture to

suggest, might be engrafted upon the public school laws as well as those of a purely sanitary character.

At our last meeting, held in the City of Galveston, several changes were effected in our By-Laws, to which I may briefly call your attention. I conceive they embody the highest wisdom at present attainable in the practical workings of this Association. Through the Judicial Council all questions of an ethical or personal character must pass before reaching this body, and as their decisions are final and not debatable, all possible irritations and criminations that might render our meetings acrimonious and unprofitable are prevented. Personalities and partisan feelings, too often culminating in bitter and lasting resentments, are utterly eliminated from this body, and all have the assurance that facts, however grave, touching the interest or the honor of the profession, will receive the calmest and most judicial consideration. The creation of Sections, under which all subjects are properly classified and discussed, will add greatly to the interest of our meetings, and doubtless create a laudable ambition among the younger members of the Association. It is the duty of the chairmen of these Sections to lay before us annually whatever may have been discovered of a scientific or practical character, thus insuring, in most instances, a series of admirable résumés of medical and surgical improvement to enrich our publications.

Other discretionary powers conferred upon committees, in regard to the presentation and publication of papers, if carefully and fearlessly adhered to, cannot fail to add much to the purity, the brevity, and the value of our Transactions. In these functions I sincerely trust they will exercise that wise discrimination which will inure so greatly to the dignity of this body. Gentlemen, I hope you do not understand me as wishing to clip the wings of young ambition, ready to soar into the giddy and dangerous heights of official recognition, but rather a

desire to repress that *cacoethes scribendi*, of which so many perish.

An evil of great magnitude everywhere threatens the profession at this time, to which I will briefly allude. Large and wealthy drug houses, principally of the North, are flooding the nation with new and untried remedies. The mails groan under circulars; our offices even are invaded by the most persistent of agents, and we are urged, by a thousand arguments, to try what we are told is a panacea for all evils. Proprietary remedies fill our prescription drug stores. Chemistry, that subtle art, invents innumerable ways to combine and render attractive to the imagination the exhaustless stores of nature, and the most experienced and philosophical practitioners are in danger of yielding to overwhelming commercial speculation. This should demand at our hands much watchfulness and caution. Whatever chemistry and pharmaceutic skill may do to render less nauseous and objectionable drugs of well-tried therapeutic value, should be accepted as a boon to humanity, and I hail with pleasure such advances, and gratefully acknowledge our obligation. Referring, however, to the standard authorities upon Materia Medica and Therapeutics, we are astounded to find that very many of these vaunted remedies have no place whatever assigned to them. Should such tests be accepted, all scientific knowledge derived from large clinical experience and observation must come to nought, and rational therapeutics drift to an endless sea of speculative theorizing, rather than philosophical deduction. We have chemicals showered upon us in resistless fury; are pelted with pills, and carried over the cataract by an overwhelming torrent of *liquors, elixirs* and *fluid extracts*, to flounder in a seething and boiling whirlpool more dangerous than the cauldron stirred by the witches in Macbeth. From this dire dilemma we can be extricated only by the most skillful selection of all that is good, and the sternest rejection of that

which should be condemned. Ignoring all commercial interest, we must be guided by the clear light of science, calmly to observe and wisely choose that which may be of value. Whatever engages profoundly many minds, must result in progress and discovery, and a science that is so actively and wonderfully made to minister to gain must inure to a higher good. Remedies will be increased, and patients will be soothed, and perhaps saved from the dread of potions scarcely less endurable than the ills they bear, though racked by mortal agony. Our therapeutics must take a wider range, and be administered with more regard to scientific accuracy, and we shall have sounder and more sharply defined views of the action of remedies.

In defending our noble profession from the shafts of wit so often cast upon us, it is not my purpose to claim infallibility. We are not, nor are any, always the exponents of truth. Our science knows no laws that may not be substituted by new and better ones. Restless as the waves of the sea, we beat upon the shores of the unknown, perhaps not the unattainable, and if attrition may wear away the mystic veil that separates from us the undiscovered, we shall be the first at the goal.

Recognizing the old maxim of the Latins, "ne plus ultra," as our device, the shield has no reverse, but ever presents ultimate and irrefutable truth.

The labor of the profession is a prodigy, and its achievements among the most splendid of modern times.

A famous lawyer, in a still more famous case, once wittily and almost sneeringly said to a medical expert, "I believe, doctor, it is customary in your profession to bury your mistakes six feet under ground?" to which the doctor responded, "And yours, sir, are suspended six feet in the air."

It cannot be said, perhaps, that a literature so vast, though marked by great profundity and brilliancy of conception, though evincing ceaseless mental activities, is a blessing without an evil. Not only is the mind staggered and discouraged, it passes

human comprehension to render useful such a stupendous array of learning.

Diogenes with his lamp, looking for an honest man, even if applied to these degenerate days, might be supposed to have undertaken a not impossible task; but the student of medicine who would essay to read the standard books of his profession to-day, had better write his epitaph, "Died of despair." "Thick as leaves in Valambrosa," the press hurls them upon us: many of them rich in the most varied learning and original research, but entering too frequently, I may venture to say, into boundless fields of speculation rather than practical deductions.

Exhaustless in ingenuity; bold in deduction; startling in the application of scientific laws; armed with the accumulated wisdom of ages, deduced from unlimited clinical experience, it has become the fashion for ambitious men to build monuments to themselves rather than become worshipers at the altar of truth. They have piled Pelion upon Ossa. Still system after system has crumbled and fallen in the dust of ages; but here and there the ore and the diamond have been seen to sparkle and flash out, and the strong arms of the miners in our profession have cradled out the pure gold and the priceless jewel.

In a science recognized as not an exact one, 'tis not possible always to give laws, and he who is the boldest explorer, the most profound searcher; aye, even the most unfaltering believer in *error* may have his uses. The very earnestness of his championship, if strengthened by great abilities, may serve to illuminate the path to others who follow.

As one man, with his natural vision, may see an object red, and another blue, while yet a third sees only green, so with the mind. The follower of Calvin or St. Peter believes that his doxy is the only true one, and that all others are but blinded. So error leads to truth in science as in religion.

A Darwin believes in evolution—that all the fine men and beautiful women, that so rule mankind with their charms, had

for their prototype that hideous mammal, the ape. A Christian, actuated by a sense of true piety and scriptural teaching, stands aghast at so monstrous a doctrine. Thus truth and error battle in the arena, like gladiators; and if victory falls not always on the side of right, we are taught to believe the one is eternal, the other fleeting and must perish. So with human labor and human life.

What comes of labor is imperishable, if directed aright. Embracing this as an axiom of faith, let us follow that beautiful custom of the East, and cast a stone upon their graves, thus building a tumulus that shall pierce the heavens and stand forever blazoned by the sun of truth. Nearly thirty centuries have been consumed in this work, and to-day it strives with unexampled power.

Is, then, a science so venerable; so remarkable for its fascinating beauty; so rich in its lore; so deeply philosophical; so vast in its expansive outreachings as to embrace all sciences, and, indeed, the universe, to extract from its floral, its vegetable, and its mineral wealth a thousand balms for the healing of wounded humanity, a fallacy and imposture? Let him who dares assert it.

Ignorance may jeer, and arrogance proudly fold its mantle of self-love about it; the law may point to its wise decisions and precedents for the government of mankind; divines may hurl their tenets and dogmas at the heads and hearts of their race, and fear and hope come unbidden. Are these striving for truth? So are we, and quite as earnestly as they. Does ignorance ask no pity? Does no one suffer the law's delays, which the matchless pen of a Dickens could not paint? Has the word of God itself no uncertain meaning? If not so, why bloody wars waged by Christians in the defense of dogmas? Does not history point to progress in civilizations, governments, the arts, sciences? Has literature made no move forward since the Pœnician gave to the world the alphabet? Is

the chemist of to-day, who enters the very penetralia of nature, matched by the alchemist, who wrought in cellars and caves, seeking the elixir of life, and the source of untold treasure?

Is the wise and accomplished judge of to-day equaled by the rude baron who, as suzerain, dispensed a still ruder justice and law two hundred years ago? Is the learned and skillful surgeon, whose fame is cast around the earth as a girdle, no better than the leech who once eked out a pittance by shaving his fellows in the most inhumane way; broke their maxillaries in endeavoring to extract an offending molar; and tortured them with fire and steel to relieve a headache? Are Sir James Simpson and Robert Barnes no improvement on the Chamberlains who invented the forceps? Have Janes, and Incim, and Gray taught nothing new which William Hunter and his nephew, Bailie, did not understand? Did John Hunter, with a splendid genius, know as much of syphilis as Ricord, Langston, Parker and Hutchison? For shame, gentlemen, that we should be taunted with pursuing an uncertain science, an *ignis fatuus*, beginning nowhere and ending everywhere. As well, and with as much truth, might it be stated that astronomy has stood, as the sun before Joshua, since the shepherds watched their flocks on the plains of Galilee; that we shall have no more Herschels, Adamses, or Leverriers; that philosophy has received no impetus since Newton discovered the laws of gravitation. Are they perfect? What science is? Franklin, when he drew the lightning from the clouds, had no conception that Morse would make it the most useful and wonderful servitor the world has ever known. And, gentlemen, it may be before another year we shall be thrilled by the notes of a Patti or a Nilsson, trilled to a Boston audience, while seated in our own music halls. Behold the telephone.

The world moves; science startles us and lays bare hour by hour the unknown; the law of yesterday is the derision of to-day. Then tell it not in Gath, that we keep not the step and

thrill not with the music of the march. It has ever been so; it is true to-day. It is the glory of our art, that it belongs to no country, and no clime.

The rivalries of nations which culminated in the martial fields of Cressy, Agincourt and Poictiers, stayed not the nobler rivalries of Wiseman and Paré; of Chiselden and Petit; of Pott and Dessault; of Cooper and Dupuytren; of Ferguson and Nélaton. Nobler and truer aims guided these.

Medicine as a science, in its broad and proper sense, has called forth the most giant efforts of the human mind. Among its cultivators are to be found men as gifted, as astute, as learned, as painstaking for the truth, as philosophical, as may be found in any profession or pursuit.

Permit me to briefly illustrate what I claim, by mostly living examples, everywhere in the highest civilizations. They are the peers of all. Go to Berlin, if you like, that magnificent capital of a united Germany. She has her Bismarck and her Von Moltke, who speak and the nations stand still; whose deeds have revolutionized Europe; but she likewise has her Langenbeck, her immortal Von Graffe, and Virchow, whose fame cannot die. They belong to science, and their names must live when military chieftains perish from the earth.

Paris, the matchless, the Mecca of travelers, the grandest and the gayest city of the universe, with unequaled historic reminiscences clustering about her arches and blazoned upon her pillars, famous beyond all for the culture of her citizens, the skill of her artizans, as the seat of a great university that once overshadowed mediæval Europe; her schools of technology and military science; points with more than Spartan mother's pride to her great hospitals, and says, "These are my jewels." Looking those splendid charities, she sees her sons wreathing their brows with immortelles. Broussais, Laennec, Larrey, Louis, Nélaton and Claude Bernard have walked these

wards, and their fame swells like a diapason to the uttermost parts of the earth.

Have these men been outstripped by the soldier, the scientist or the academician? Have the subtle and eloquent jurists of la belle France woven into the meshes of her jurisprudence grander principles than they have engrafted into her hygiene and sanitary laws? To whom should be given the greatest honor?

Is he not more worthy the gratitude and honor of a people who, having profoundly studied the laws of health, unselfishly urges their observance for the greatest good of the state and highest happiness of the citizens, than he who marshals them to war? When Laennec discovered and taught the art of auscultation and percussion, and Nélaton of the silvery tongue, with unrivaled skill in diagnosis, threw a halo around his clinics, they conferred a greater boon upon mankind than all the lawyers and marshals of France have done. Theirs was the splendid triumph of science in the interest of humanity: they sought to save.

Beyond that surging channel lies vast and gloomy London. She is the capital of Britain, and her four million souls send up a roar as of distant artillery, to confound the senses. In her midst lie vast and varied manufactories; in her vaults, for she is the money centre of the world, lie hidden countless treasure; her ships go down by the thousand to the sea; her St. Paul's lifts its spire heavenward until it pierces the smoke clouds that almost ceaselessly veil the sun. Spread out before you lies famous Covent Garden; yonder, London Bridge, rendered classic by the gifted Macaulay's metaphor, spans the Thames; underneath its dark waves pierces a grand tunnel, and soon, upon its terraced banks will stand Cleopatra's Needle, from far-off Egypt; while her splendid palace of Buckingham, the residence of the Queen, scarcely surpasses the magnificence of the noble piles that are the homes of her peers and merchant

princes. These illustrate the high civilization, the wealth and power of a people. 'Tis here the realization of the grandest conquests of the human mind should be expected and realized. National and monumental charities should and do exist.

In the midst of this stupendous multitude thousands of casualties must occur, disease in myriad forms be developed. Gaunt, pale and haggard want is covered by the dust from the glittering wheels of Crœsus. For the first, great hospitals are provided. St. George's, Middlesex, London, Greenwich and Guy's, with many others, have been reared. In these no expense is spared, the wants of the sufferers alone being the guide. For once, wealth and poverty are coëquals. Lazarus need not envy Dives. With as perfect equipments, and as skilled a corps of medical and surgical attendants as the world ever saw, the London poor, when they enter these, have all that wealth and title can procure. What, then, have these noble hospitals done in return for the people and the world at large? From and through them the noblest medical schools in the world have existence, and the fame of English physicians and surgeons, like her drum-beat, is heard around the world.

If England has her Cambridge, her Oxford, and her Inns of Court, she also has her College of Physicians and Surgeons no less illustrious than they. To mention the names of those who have won distinction in all proper medical studies might fill a volume. They are thick as the stars in yonder vaulted dome. Austin, Balfour, Bryant, Barnes, Hewitt, Bealle, Burdon-Sanderson, Murchison, Roberts, Parks, Reynolds, Sir Wm. Jenner, Johnson, Simon, Sir Henry Thompson, Erichson, Holmes, Paget and Spencer Wells need only be mentioned to illustrate the force and truth of my remarks.

To some of these the full measure of fame has been awarded. Sir Henry Thompson, Mr. Paget and Spencer Wells will live when England's Premiers will have been forgotten.

Whoever among you may have read from the pens of two

of America's illustrious sons, Gross and Thomas, the articles headed "A Century of Medicine and Surgery in America," know something of the status of our profession in our own land. Scarcely have they been able to mention in the briefest possible way the achievements of skill in every department of medicine and surgery. Enough has been said, however, to crown our brows with the laurel and the oak. Massachusetts has had her Winthrops, her Choate and her Webster to add lustre to her civil list; but she has had as well her Warrens, her Bigelows, her Bowditches, and her Oliver Wendell Holmes to shed a halo upon her medical and surgical list no less brilliant and enduring than theirs.

New York, the grand commercial metropolis of our country, whose wealth and splendor have marked her as the greatest and most cosmopolitan of our cities, stands as preëminent for medical talent, as she does for legal, clerical or scientific, or that daring genius that has made her sons the merchant princes of the world. She has no more honored names, aye, none that match them, than Emmett, Peaslee, Fordice-Barker, Thomas and J. Marion Sims.

The oldest civilizations, the most erudite and critical schools, have delighted to do them honor. France, Italy, Germany and England acknowledge and praise them.

Need I mention more? This much I have said to show that he who points the finger of derision at us and charges that we are pursuing a phantom, shows both the stupidity of his intellect, and the feeblest conception of the better qualities of the heart.

When law becomes perfect, and no dead statutes cumber the archives of states; when science and its votaries cease to illuminate and throw a more effulgent light; when governments are perfect, and Utopia reigns; when religion and one belief binds the whole human family with a circlet of love and Christian unity; when mind responds to mind, and all have but one

system, free from all error; then, should medicine be found lagging, cast what reproach you may; but cease, in the name of justice and truth, while she runs as the hare and you but bay as the hound. When all men live alike, eat the same food, pursue like avocations, are born with no distinct and different diathesis, sleep the same number of hours, are exposed to the same temperature; aye, in a word, when God's laws are changed and elevation, moisture, geographical lines, density of population or rural life have no influence upon man, and in no manner alter his diseases, we will give you medicine by well-defined rules and positive and constant results. Now, however, with physiological laws ever varying, modified as the functions of the body must be and are with climatic and zymotic diseases, sthenic and asthenic, endemic and epidemic, with well-defined pathological lesions and none appreciable, who but those possessed of the sublimest wisdom and consummate skill can hope to practice an art so difficult, with benefit to mankind and honor to himself?

Gentlemen, our profession has had in its ranks orators as accomplished as Walpole, and as passionate as Mirabeau; authors as classic and graceful as Addison; thinkers as profound as Newton; men whose daring skill has been the admiration of mankind.

I need not have paused to make this defense of Medicine as a science or an art; in the broad light of its unsurpassed achievements is to be found its amplest vindication. The illustrious names I have cited need no champion; they shrink from no comparison; they demand honor, for it is due. They have won it, and not they alone, when pestilence covered the land, and men and women fled as from the face of death; when cities and empires stood appalled before the avenger; in the palace, in the lazar-house, and the crowded hospital; on the field of carnage, amid the roar of musketry and the thunder of artillery, and the rush of armed men to death; by a bravery

and single-hearted devotion to duty, a skill and intelligence so rare as to place them above praise. With a patience unsurpassed, a devotion unequaled, an ardor that would brook no opposition, a Christian philanthropy never excelled, a consecration of the highest intellectual powers to the noblest purposes, they have made Medicine a leading science, and adorned it with the most splendid triumphs.

I thank you.

REPORT OF COMMITTEE ON CLIMATOLOGY AND EPIDEMICS.

BY J. H. SEARS, M. D., CHAIRMAN.

Your Committee have no apology to make for the meagre data they present, as it could not be expected that five physicians, engaged in active practice, could spare the time necessary to collect reports from all the counties of this great State as to the prevalence or otherwise of any epidemics, and also to secure reports of their meteorological phenomena. We must be satisfied to submit to you what of interest we have gathered, hoping you will receive it in the same kindly spirit in which it is offered.

If our information is correct, we have had a year of unprecedented good health and good crops.

During the first half of the year there prevailed epidemics of measles, pertussis and influenza, so mild in form as scarcely to require medical attention. During the latter half of the year there was some confusion, or rather disagreement as to diagnosis, some pronouncing the prevailing eruption measles others rubeola, or rotheln, and others scarlatina. Hence we conclude that many parts of our State have suffered from some one of our exanthematous or infectious diseases, and that these have been either badly mixed or our profession confused in their diagnosis and reports.

Dr. F. Herff, reporting for San Antonio, says scarletina made its appearance in that city in November, 1877, and is not now entirely extinct. It was of a mild type, many cases without

fever; difficult to keep patients indoors. In many very little desquamation and no albuminuria. Some of his professional brethren differed with him and called it roseola. The reasons given for his diagnosis are, 1st, a number of cases in the same family, some of the graver type characterized by high temperature, severe angina, albuminuria and desquamation of layers of epidermis; and even the milder cases, when exposed, would end in dropsy and glandular abscess." He reports 78 cases with 3 deaths—1 from dropsy, 1 pneumonia during desquamation, 1 from convulsions during height of fever. Abscess in cervical glands in 3; abscess in inguinal gland in 1; acute rheumatism during desquamation in 3.

Hooping cough prevailing since December. Epidemic mild. Treated 40 cases with 1 death from broncho-pneumonia. In November diphtheria prevailed; treated 18 cases with 2 deaths from asphyxia—membrane closing larynx and trachæa. Trachæotomy performed 4 times with 3 deaths. The presence of the epidemic influenza was manifested by the appearance of diphtheritic membrane on wounds made in operating for hydrocele and cancer, although great precautions were taken to prevent infection. He reports an extensive epidemic of mumps; saw 72 cases in his practice; a greater tendency than usual to metastasis to testicles. Three cases of orchitis. In one case the parotid gland suppurated, which is very unusual.

Notwithstanding these epidemics, the Doctor claims that his city (San Antonio) has been blessed with unusual good health.

Dr. T. M. Marks, of Marshall, Texas, reports his city healthily located and naturally well drained, except a swamp or marsh on the east. There were some cases of measles and hooping cough; mild; not epidemic, but sporadic, which seems more the case throughout the State. He reports the usual malarial affections, mostly for that part of the city nearest the marsh.

Dr. D. R. Wallace reports for Austin, no epidemics; a few

cases of measles, probably 30 or 40. Good general health for the year.

Dr. C. H. Wilkinson, of Galveston, reports no epidemics. In his report he would lead one to suppose that, with a litle care, a Norma of Sanitation could be established for the entire city. This is not without good show of reason when we reflect what has been accomplished by the efforts of a leading sanitarian, Mr. Edwin Chadwick, for prison and poor houses of England. We have present in the Island City many of the conditions naturally existing for a perfect sanitation—pure air and good ventilation; pure water, uncontaminated with sewage admixture; perfect drainage, and porous, sandy soil. Then all that remains for the city to do is to keep clean and for the citizens to utilize their bathing advantages and live on good food. From a comparison of the degrees of humidity of several of our more eastern coast cities, for three years, Galveston has the highest degree in winter and the lowest in summer. (See record kindly furnished Dr. Wilkinson by Chief Signal Officer U. S. A.) Without further special notice of Dr. Wilkinson's report, we would commend it to the Publishing Committee. His claim that Galveston is the warmest city may not appear so patent when we compare meteorological reports from San Antonia, Waco, Marshall and Gains City with Galveston.

Dr. J. C. Womack, of Bremond, Texas, reports 16 cases of small pox, 5 cases of varioloid, with 5 deaths. Disease confined to two houses.

Dr. Haley, of Fairfax, Bell County, reports one case of small pox in his village, brought from Bremond.

For Waco we report one case of varioloid and one of small pox; both recovered under care of Dr. H. W. Brown.

We have had in our city and county quite a number of cases of hooping cough, mumps, measles, rotheln or rubeola scarlatina, according to the various diagnoses of our profession.

Dr. D. W. Brodnax, of Milam County, reports the presence of

rotheln in his county, and makes an argument in favor of electricity being the chief factor in all our malarial affections.

Dr. B. C. Drury, of Marlin, Falls County, reports measles prevailing since January last. Treated 20 to 25 cases, with 1 death, following abortion; type mild but extensive. Says hooping cough and mumps have prevailed for the entire year of a very mild type, not requiring any treatment except in infants. Neither are regarded of any gravity by the people.

The term epidemic in this paper is not intended to convey more than the idea of the occurrence of a considerable number of cases of an infectious class of diseases of the acute type, which under favorable conditions usually become epidemic.

As the majority of infectious diseases usually appear as endemic or epidemic, it is fair to infer that any disease which we know endemically or epidemically, belongs to the class of infectious diseases (there are, however, exceptions, such as syphilis). I cannot leave this point of our report without mentioning the rapid growth in the belief of a *contagium vivum seu animatum*—the theory that the poisons of infectious diseases consist in living beings, or low organisms. It is true that the proof of the theory of a *contagium vivum* is in no way complete, since not in a single instance of our most common infectious and contagious class of diseases have we been enabled, with certainty, to point out the particular organism. If we turn to the chemical theory, we fail in demonstration, and are left in doubt and perplexity. When we refer to splenic fever, we think the germ theory may be true, and when we deal honestly with ourselves we feel inclined to exclaim with Mark Twain, "What we don't know is vast."

But as conservators of public health, we feel confident that a few important facts have been discovered, upon which we can base fruitful action. Sanitation has thus far yielded good results, and promises brighter and greater rewards in the future. It is claimed, and fairly demonstrated by actual experiment, that most if not all our zymotic and infectious diseases can be pre-

vented by proper and timely sanitary precautions. This forces the conclusion that unsanitary conditions are either the contagion or the nidus. Then we need only destroy the nest to prevent the brood. Then the great duty of the profession of to-day is preventive medicine and instruction of the masses on sanitary, hygienic measures, &c. Owing to the fine breezes, open country, pure air, infectious diseases make little progress in epidemic form in our State. If we had plenty of good water, or would filter that we have and free it from all organic impurities, we would at once reduce the sick rate one hundred per cent. and bring the death rate to a minimum. Thus we account for the universal good health of our State when the rainfall is greatest throughout the year. Our drinking water is then more abundant, less stagnant water, and malarial poison is largely diluted, so that with each drink of water we swallow less poison, and by rapid elimination we keep free from malarial affections. I feel confident that the water we drink is responsible for more than half of all our malarial affections.

Next to impure water we would place impurity of the air we breathe as a cause of disease. Prof. Tyndall has well and beautifully demonstrated that decomposition will not take place in pure, moteless air, and that putrefaction is not inherent in anything, but that functional life, or fermentation, is a necessary factor in the process. Then to keep the air pure we must remove the causes which contaminate or septify it. We use the word septic, believing that certain conditions of putrefactive filthiness (either animal or vegetable), will so despoil the air as to act as a septic poison when received into the blood (through respiration), producing certain low forms of fever—diphtheria, croup, &c., &c., according to the susceptibility of the party receiving it. The smallness of the dose of septic poison which will affect the system has not as yet been determined, but is known to be extremely minute. Then there is no reason to deny that it may not be generated in and received from foul air, as

from putrid sores. The type of the disease or infection may depend on whether the septic poison originated from animal, vegetable or mineral sources. Since septic poisons are equally potent for evil after being freed from all organisms by filtration through porous earthenware, we think that a septic theory properly developed would be preferable to the germ theory. Dr. B. W. Richardson says: "If the air around us is charged with invisible germs which come whence we know not, and which have unlimited power to fertilize and multiply, what hope is there for the skill of man to overcome these hidden foes? While on the other hand, if the opposite notion be true, we have complete mastery over the diffusion of the poisons of all the communicable diseases. We have but to keep steadily in view that the producing and the reproducing power is in the affected body, and we can, even with our present knowledge, all but completely limit the action to the propagating power of that body—its power, I mean, of secretion and diffusion of secretions."

It appears that septic poisons may contaminate the entire fluids of the body, without in any way multiplying by cell or germ growth. The elimination of such poisons seems difficult in many instances, not finding ready exit through the ordinary emunctories or channels of elimination, they continue the rounds of the circulation, until all the organs and tissues of the body are more or less implicated, and at last by the vital forces are expelled in some unusual way, either through the cutaneous surface, mucous membranes, or the glands, to the great detriment, for the time being, to these tissues.

It is plain, that as yet we have no theory which satisfactorily explains the phenomena manifested in our various infectious maladies, and that we will be forced to classify them and place them under the rules or laws which seem to govern in each particular infection. This may appear to be as difficult as to make them all bend to one pet theory. But the truth is before us, and let us make the best of it, for it is our life business. Then let

us work faithfully to the end, hoping ever for a rich reward.

Could we get the State to drain our large swamps, and our land owners generally to adopt a thorough system of drainage; all our citizens to filter their drinking water and pay more attention to cleanliness of homes and persons, and use only wholesome food and drink in moderation; and with better ventilation of their dwellings, we would establish for our State a norma of sanitation, and probably reduce the death rate from 12 or 14 to 2 or 3 per thousand, thus saving to the people the great loss of time, the suffering and the costly expenditures of sickness, and to the State and society the services of many valuable lives.

The steady improvement in the general health *pari passu* with the increasing rain fall, and consequent better water supply, is very striking, and teaches us a lesson from which we may profit much. Some one may ask, "How, then, do you account for the exceptionally good health during our exceedingly dry years, when there is scarcely any rainfall, as in 1862?" In such dry seasons the stagnant pools and tanks are dried up, and people are forced to get water from running streams—living water and wells.

The conditions which seem to favor the prevalence of malarial diseases, are seasons of alternate wet and dry—enough rain to fill the ponds and tanks, and yet not enough to dilute or wash away the malarial emanations; and the weather in such seasons somewhat imitates malarial fever, being alternately cool and hot, wet and dry, as it were intermittent paroxysms of weekly occurrence.

In conclusion, I must express the hope that in the near future our Legislature will be composed of statesmen of broad and liberal views, who will dare to enact sanitary laws, and *vote* appropriations to enforce them, to the great improvement of the health and happiness of our people, and the economy of valuable lives to the State. Let us hope, too, that we may speedily see the end of that most terrible of all epidemics, whose ravages

have reached every part of our country, and threaten the *very life* of the State—office seeking; and that in the place of the hungry hordes of office seekers, we may have *the office* seek *the man;* and that when he *is found capable, honest and faithful* in the discharge of his duties, he may hold his place by a tenure more secure than the whim of a superior officer, or the caprice of a party. Let us strive, both in the State and in the society, to put and *keep* "the right man in the right place." I do not mean that we shall become politicians, but I do mean that our profession does not receive that consideration from either State or General Government to which it is justly entitled, and it is our duty to use every means to correct this. We have no standing in the eyes of the law; our teachings have no legal force. Our best sanitary and hygienic advice, costing us years of toil in observation and experiment, fall unnoticed and unheeded to the ground. In the name of humanity, we should make constant and loud appeals to our law makers in behalf of the best interests of the people, until our cry is heard and our influence felt and duly acknowledged.

NOTE.—No report from the Committee on Prize Essay. T. R. C.

SECTIONS.

PRACTICE OF MEDICINE AND THERAPEUTICS.

BY T. J. HEARD, M. D., GALVESTON.

In the attempt to present a brief resume of the progress of Medicine during the past year, I find the subject attended with more difficulties than at first sight would appear. To collect and collate all the assumed facts and just deductions which have been evolved during the last year presupposes an intimate acquaintance with what has been established heretofore, which is beyond my opportunities and ability.

To the mass, it may seem that fallacy in medicine is that on which the regular profession have placed the ban, and the difference between regular and irregular is the difference between truth and falsehood. The constant mutations in regular medicine have clearly evinced the fact that medical opinion has for ages been formed mainly from two sources, that is, false theories and false facts. Such being true, it has, among regular physicians, in the main, resulted in false practice. As an illustration, what practice more diametrically opposite than that of Broussais and that of Hamilton? The first seeing in all diseases gastro-enteritis, hence cool drinks and soothing lavements; the latter trusting mainly as a means of cure on most thorough drastic purgation. Notwithstanding, to us, from our present stand-point, such differences seem not only irrecon-

cilable, but preposterous in the extreme. It is hardly worth while to consume your time by referring to the inconsistencies which obtained but yesterday as it were. But a few years ago water, in febrile affections, was denied the sick; now everybody sees the propriety of giving the patient as much as his stomach can bear. The great mass of inflammatory and febrile affections were kept warm, poulticed, applied with teas and diaphoretics; now the Germans, and a great many outside of Germany, pursue a diametrically opposite course. They are drawn from warm beds and placed in cold baths of a temperature varying from 60° to 80°, and there kept until the temperature is brought down to the normal standard. What would seem more opposite and more irreconcilable than the practice of some of the greatest lights in medicine, who lived, as it were, but yesterday? Such, for instance, as Rush, Physic, and their immediate cotemporaries, and scores of lesser lights, who lived up to within thirty years; not obscure men, but leaders in the profession, who practically bled men to death's door, to save their lives. Is it possible to conceive of a greater contrast than is daily presented to us in our mild, semi-expectant treatment? It is a notorious fact, that those who now are regarded as being the safest practitioners give comparatively but little medicine; whereas thirty or forty years ago from a drachm to two drachms, and in some cases as much as an ounce, of calomel was given with no more fear than we would now give one grain.

In the midst of such contrariety, what else could reasonably have been expected than a rebound into the opposite extreme? The extreme to which I refer is that of Homœopathy, Hydropathy. and such like. For ages, the extravagant hypotheses of a few leaders tyrannized over the common-sense convictions of minor lights. Nothing was too preposterous, not simply to believe, but to be acted upon, and the non-conformists were branded as quacks, and denied fellowship with those termed regulars. Notwithstanding all these conflicts of opinion, and

the fearful war waged upon humanity, the human family still lived on.

After this brief review, necessarily imperfect, I propose to consider some leading observations and deductions therefrom, which relate to the present time.

It has been a matter of general observation for a number of years, that humanized vaccine matter has not given protection against variola to the same extent it did at first. In other words, that the matter has deteriorated, so far as protection against small-pox is concerned, and that in its transmission through human systems, it is believed by some, that it has acquired properties which are very undesirable, to wit, the transmission of certain taints, syphilis, scrofula, etc. In view of the inefficiency of humanized vaccine as a protective agent against the occurrence of small-pox, Dr. Henry A. Martin, of Mass., has, during the last thirty-eight or forty years, given special attention to this subject. His contribution to the American Medical Association is of very great interest—presenting in outline, not only his individual observations, but largely the history of the doings and opinions of the ablest men who have written on this subject. It is hardly consistent with the nature of this paper for me to present even a skeleton of Dr. Martin's contribution, for it extends over some sixty pages of the Transactions, and is replete with valuable observations and suggestions. As the ground-work of his paper, permit me to qute. He says: "Without further preface, let us consider the questions on the determination of which must depend the acceptance or rejection of the method of true animal vaccination. These questions may be included under four heads:

"1st. What is true animal vaccination?

"2d. What is Jennerian vaccination?

"3d. What are the advantages and defects of the Jennerian system? and is the assertion of the latter founded on reason and experience?

"4th. What are the advantages and defects of true animal vaccination? and how well founded are the assertions made by its advocates, that by its honest and full acceptance, and thus only, can the defects—which time and observation, a million of times repeated, have demonstrated in vaccination so long practiced—be triumphantly remedied, the greatest boon ever granted to humanity restored, and, through the defects of the Jennerian system justice and due honor at last done to the memory of Edward Jenner?"

In justice to this Association and the people of Texas, I have written to Dr. Martin to send me as many of his reports referred to above, as I deem necessary to present at the present meeting, which have been sent, and I herewith present you.

Prof. S. D. Gross, M. D., L.L. D., D. C. L., Oxon., contributed a paper to the American Medical Association, at its last meeting, which is published in the Transactions, on the "Proximate Cause of Pain." I have only time in this contribution to notice the leading divisions of this subject. He says:

"I shall state as preliminary to the whole, five distinct propositions.

"First. That the nervous fluid, as it is termed, is very similar to, if not positively identical with, the electric or galvanic fluid, modified, of course, by the play of the vital actions, which everywhere exists in the organs and tissues through which the nervous fluid circulates.

"Second. That the fluid under consideration is generated by the brain, spinal cord and nervous ganglia, and that the nerves are simply passive cords, ropes, or, so to speak, wires for the transmission of the nervous fluid.

"Third. That what is called pain is due immediately and directly to obstruction in the transmission of the nervous current, thereby causing an accumulation of nervous fluid at the seat of obstruction. In the natural state every atom of living matter receives a certain quantity of nervous fluid, necessary

for its wants; when this quantity is exceeded or redundant pain is an inevitable result.

"Fourth. That pain can take place only in connection with a sound state of the hrain and spinal cord ; or, in other words, that when these organs are seriously affected, there can be no perception of pain or suffering whatever.

"Fifth. That pain is modified or influenced by structure, and by the nature of the exciting cause."

The latest novelty is the use of the strong, elastic bandage with which Dr. Henry A. Martin claims to have cured over six hundred cases of varicose and chronic ulcers of the leg, without a single failure. "The bandage is of pure rubber, ten and a half feet long, three inches wide, and thickness number twenty-one (Stubs' wire gauge). The length and breadth may vary with the size of the limb, but this is the most desirable thickness. It is applied by winding one turn just above the malleolus, then one around the instep and sole, then spirally up the leg to the knee, where it is fastened by tapes attached to the end of the bandage for that purpose. If it is desirable to apply it as far as the groin, a bandage eighteen or twenty feet long will be necessary. It should be removed at night, and the ulcers protected by some simple dressing. In the morning all oily substances should be removed, as they injure the bandage. It should be applied before leaving bed, with just sufficient snugness to keep it from slipping down, and the increase of blood in the veins on standing will cause it to become of the exact degree of tightness necessary to give due support."

The paper is well elaborated by Dr. Martin in the 28th volume of the Transactions of the American Medical Association.

In the January number of the New York *Medical Record* for 1878, on page 21, some valuable suggestions are made by Dr. C. E. Billington, on diphtheria, which, in justice, I feel I should bring to your consideration. He says his beliefs bore no relation to any theories of others, "bacterian" or otherwise; but

rested on the solid basis of induction, from independent, careful and oft-repeated clinical observations. The most important of these beliefs was that "diphtheria is, to all practical intents at least, primarily a local disease, becoming constitutional only by absorption."

His treatment is as follows:

FORMULA I.—*Iron and Glycerine Mixture.*

℞. Tinct. ferri chloridi.....fl dr. i.—dr. iss.
Glycerinæ—Aqua.....of each, fl oz. i.
M.

FORMULA II.—*Chloride of Potash Mixture.*

℞. Potassæ chloratis..... dr. ss.—dr. i.
Glycerinæ..... fl oz. ss.
Aqua calcis..... fl oz. ijss.
M.

"The weaker strength indicated of both mixtures is the one I generally employ.

"I formerly used for a time, and published as a substitute for No. 2, a combination of salicylic acid 1 scruple; sulphite of soda 1 drachm; glycerine ½ oz.; water 2½ oz. As this is less pleasant than No. 2, and probably no more efficacious, I have discontinued its use.

FORMULA III.—*Spray Mixture.*

℞. Acidi carbolici..... m. xv.
Aqua calcis..... fl oz. vi.
M.
To be used with a hand atomizer.

RULES FOR TREATMENT.

"1st. No. 1 and 2 alternate every half hour.

"2d. Spray the throat with No. 3 several times whenever the above mixtures are given.

"3d. When the nostrils are implicated, they should be thoroughly syringed out with warm salt water.

"4th. Use no brush or swab to the throat. Use 1 drachm of No. 1 with the syringe directly against the affected surface.

"5th. Give no quinine or unpleasant medicines.

"6th. As a rule, use no alcoholic stimulants.

"7th. Nourish the patient with an abundance of cold milk, to which lime water may be added, given frequently; and in case of extreme exhaustion, more nutritive animal substances may be used. The patient should be induced to take nourishment freely, and to always bear in mind that there is hope of recovery so long as he can be induced to eat."

B. B. Brown, M. D., of Baltimore, read before the Baltimore Clinical Society, January 3d, 1878, a paper on viburnum prunifolium as a uterine sedative, and gave a number of cases illustrative of the valuable properties of the remedy. In our country it is known as the black haw, and is very abundant in Middle and Eastern Texas. The bark of the root is the part used. The fluid extract, from half a drachm to a drachm, is the dose usually prescribed, three times a day, which is equivalent to a corresponding amount of the pulverized bark of the root. It is evidently our most valuable remedy in case of threatened abortion with hemorrhage. The attention of the profession was first called to the use of viburnum by an article written by Dr. Phares, Newtonia, Miss., which was first published in the Atlanta *Medical and Surgical Journal*, in 1866, and subsequently republished in the *Detroit Review*, December, 1866, and the Boston *Medical and Surgical Journal*, October 10th, 1867. Dr. Phares claims for this remedy that it is a good "nervine, antispasmodic, tonic, astringent and diuretic." He adds: "But it is particularly valuable in preventing abortion and miscarriage, whether habitual or otherwise; whether threatened from accidental cause or criminal drugging. It tones up the system, preventing or removing those harassing nervous symptoms that so often torment and wear down the pregnant woman, and disqualify her for the parturient effort. It enables the system to

resist the deleterious influence of drugs so often used for the purpose of procuring abortion."

I think it but just to this Association to call attention to Dr. S. Wair Mitchell's little book entitled "Fat and Blood, and How to Make Them," published by J. B. Lippincott & Co., in Philadelphia, in 1878. It is a small book, only 106 pages, and divided into seven chapters, as follows: chapter I. or Introduction; chapter II. Fat in its Clinical Relations; chapter III. Seclusion; chapter IV. Rest; chapter V. Massage; chapter VI. Electricity; chapter VII. Dietetics and Therapeutics; General Results; Cases.

Phosphorus justly demands, at the hands of the profession, serious attention. In the September number of *New Remedies*' page 263, a formula with which I am better pleased than with any I have seen, reads as follows: Take—

Alcohol, 95 per cent	oz. iss
Cane Sugar	oz. ss
Sugar of Milk	oz. ss
Phosphorus	gr. ii
Glycerine to	oz. x
Albumen of one egg.	
M.	

Dissolve 2 grs. of phosphorus in absolute alcohol and glycerine, at a temperature of about 170° Fahr. with the addition of the cane sugar and sugar of milk, which addition prevents any portion of the phosphorus from passing into an acid state during the time of solution. When the solution is cold, add the albumen of one egg, first mixed with a little glycerine and alcohol, and then add glycerine sufficient to make 10 ozs., the strength of the finished product being $\frac{1}{40}$ of a grain to the drachm, which is quite strong enough to admit of its being preserved a long time without change, and can be taken, if required, without dilution. To make it more agreeable, add a few drops of the oil of neroli, which effectually destroys the flavor of phosphorus, and also its power of phosphorescence when added to water.

I have used phosphorus in my practice for years, but was never pleased with its effects until I adopted the above formula. I often associate the above with nux vomica, iron, or other remedies which are indicated, with excellent effect. For an adult, a drachm is the usual dose, three times a day.

Alexander Hutchins, A. M., M. D., President of the Medical Society of the County of Kings, New York, read before the Medical Society of the State of New York, on January 20th, 1877, a contribution on Jaborandi, offering a résumé of the subject. The leading points presented by him are as follows:

MODE OF ACTION.

Bartholow says, "its action is not unlike tobacco, aconite, veratrum, agents which depress the motor functions of the spinal cord and sympathetic nerves. The symptoms all point to a relaxation of the walls of the arterial system. With great promptness, as a rule, it increases the functional activity of the sudoriparous, salivary and mammary glands, and is diametrically opposed to atropia in its action."

INDICATIONS.

This agent is capable of withdrawing say $\frac{1}{6}$ of the water of the blood through the salivary and sudoriparous glands in a short time. Hence, it may be used in all cases where the indication is to depurate the system of that which is offensive, and where increased activity of the emunctories last named may be affected, for the relief of organs of more vital importance to the well-being of the system. Hence its value in anasarca, chronic desquamative nephritis, pleuritic effusion, Bright's disease, diabetes.

There are other diseased conditions too numerous to mention in which this remedy may be used, probably with benefit, but I will say that it is especially valuable as a galactogogue. The usual dose is 60 grs. in infusion, made thus: Add 60 grs.

of the leaves to three ozs. of hot water; when cool, strain. Administer half an oz. of this infusion every thirty minutes until the desired effect has been attained. One grain of the alkaloid pilocarpine is equal to a drachm of the leaves.

Although I have not seen it suggested, nor have I tried it, notwithstanding I feel no doubt that the above remedy, in connection with quinine or salycilic acid, will prove eminently useful in febrile or inflammatory conditions.

It has been determined by Prof. Binz and Dr. L. Thau that a large proportion of the quinine passes off from the kidneys in a very short time. The last named gentleman determined that from a third to a half was excreted through these organs in six hours, and three-fourths in twelve hours. Is it not evident if a full dose of quinine or salicylic acid was administered immediately after general diaphoresis was established, that they would more effectually permeate the vascular system, and more favorably influence the system than they would as ordinarily administered, especially as antipyretic. More might be said on this subject, but the foregoing hints I regard as sufficient for the present.

Experiments into the physiological action of medicines have given a fresh impulse to the study of Materia Medica and Therapeutics. Dr. Sidney Ringer, basing the therapeutic indications of remedies upon their physiological actions, has become one of the most popular writers and lecturers of Therapeutics; and although his clinical deductions from small doses frequently repeated, administered in many instances as it were upon the Hahnemannic principle of *similia similibus curantur* at first excited incredulity on the part of his readers, yet the popularity of his work on Therapeutics has been unprecedented, having passed now, within a short time, through six editions. Bartholow has followed somewhat in the same course, and Charles D. F. Phillips has gone still further, and revived many obsolete remedies, and pointed out their thera-

peutical indications from their pathogenetic effects. Among these are pulsatilla nigracans, which belongs to the genus ammone. He (Phillips) says that in inflammations of the mucous membrane of the alimentary canal, conjunctivitis, and in otitis, he has had brilliant effects from the use of pulsatilla in five-drop doses, administered internally; and in cases of ophthalmia, by the local applications of the tincture of pulsatilla, one or two drachms to four ounces of water, the strength determined by the sensibility of the inflamed surface. He also says that it exerts a peculiar action on the uterus; prescribes it with much confidence in functional amenorrhœa and dysmenorrhœa, and also leucorrhœa, in which latter affection he also uses a vaginal injection composed of a teaspoonful of the tincture to a pint of cold or tepid water. Of bryonia dioica and alba, he writes: "In pleurisy and other serous inflammations, bryonia is an exceedingly valuable drug, after the general pyrexia has diminished or disappeared, and the exudation continues; it proves most useful in limiting the extent of, and hastening the absorption of the effusion. It is more especially effective in pericarditis and pleurisy; in these maladies it fully equals any remedy that exists. In rheumatism of various forms bryonia has proved useful, especially in painful and stiff joints. Dose, from three to ten minims of the tincture." Of chamomile (chamomella vulgaris), German chamomile, Binz says: "The oil contained in the flowers has the power of allaying reflex excitability, and is used chiefly in neurotic pains, situated in the female sexual organs, or due to irritation reflected from them to other parts. It is also given to increase the menstrual flow." Grissar found that reflex excitability which has been artificially excited by strychnia or brusia can be calmed again by chamomile oil, or rather, that an animal fortified with a dose of the oil is not capable of being tetanized by a dose of strychnia, which threw an unprotected frog of similar size into characteristic spasms. This will point to its use in poisoning by strych-

nia. Dr. John Harley, in his admirable work on the "Old Vegetable Neurotics," has given us the results of his experiments with belladonna. The study of these, along with what Horatio Wood has furnished us on the same subject, has opened up a new field in the use of belladonna and its alkaloid, atropia, as extreme and revolutionary as has been developed by the later studies of the action of digitalis. Instead of belladonna holding rank only as a narcotic far inferior to opium and some others as antispasmodic of no very high claims, but as *par excellence* a midriatic, it now takes rank as a stimulant, both of the heart and to the nerve centres. Dr. Harley says in his conclusion of the analysis of the effects of this drug, that "the whole phenomena may be attributed to excessive stimulation of the nerve centres, attended by increased oxidation, and that hyperoxidation of nerve tissue is the essential action of it in poisonous doses."

Belladonna, in not too excessive doses, increases the action of the heart, both in force and frequency, showing that it cannot act by paralyzing the inhibitory fibres of the vagi only, but must also stimulate that organ through the sympathetic; the arteries are at the same time contracted, and the blood pressure increased, and the temperature elevated. This febrile condition is a true pyrexia. This stimulant action of the drug may well be applied by the hypodermic injection of atropia to stimulate the heart and respiration in depressed, collapsed, or algid conditions of the system. Nitrite of amyl, by inhalation, might be used for its temporary action in the same direction, until the atropia has had time for absorption.

Phillips says many inflammations are amenable to its powers. In five-drop doses of the tincture, repeated every hour, to the extent of five or six doses, he has seen erysipelas, marked by a superficial inflammation of the skin, not extending to the subcutaneous areolar tissue, and free from vesicles, and even when it attacks the brain, subside in so short a space of time

as to be quite astonishing. Ringer and Phillips praise it highly in sore throat attended with fever, pain, redness and swelling of the tonsils, but, says Phillips, it is entirely useless in sore throat of the aphthous, diphtheritic and syphylitic kinds. Harley praises it in pneumonia, nephritis, and some other inflammations, stating that he has seen them resolve under its influence more speedily than under any other treatment, and believes that "it has not yet attained to its place as a therapeutic agent," and anticipates that its sphere of usefulness will "be acknowledged before long to be coëxtensive with that of the acute disease itself."

By its antagonism to the effects of opium, physostigma and hydrocyanic acid, it is destined to attain high rank in the treatment of cases of poisoning by these agents.

Ringer says, on page 367, that ipecacuanha will check the vomiting of pregnancy, in drop doses of the wine every two or three hours. Should this fail, corresponding doses of the tincture of nux vomica often succeeds. It has been just stated that in some instances nux vomica succeeds when ipecac. fails; this is notably the case when the tongue is coated with a creamy fur, the stomach out of order, much acidity and heartburn. In these cases it is often useful practice to give both simultaneously. During lactation, nausea, vomiting and great flatulence often obtains. Drop doses of the wine of ipecac. three times a day, soon cures. The same is true in regard to the menstrual epoch.

The morbid state of the stomach in the morning vomiting of drunkards is very effectively controlled by arsenic, in drop doses of Fowler's solution, three times a day. The ipecac. is also useful in cases of convalescence from acute diseases, and particularly valuable in the vomiting of children. It is also used in the vomiting of hooping cough, in similar doses.

The above brief extracts are presented only as evidence of the advances now being made in medicine, which but a few

years ago would have been styled the veriest absurdity. The Homœopaths have attached great importance to levigation and dilution of remedies, and we are beginning now to find out that there is more truth in their assertions than we had supposed. For instance, add one grain of calomel to twenty grains of sugar of milk, levigate this to a perfectly impalpable state, and divide it into twenty powders; give one of these dry, on the tongue, every half hour, and allow the patient simply a teaspoonful or two of cold water to wash it down, and I will venture the assertion that in nineteen cases out of twenty of cholera infantum relief will be obtained before the powders are all used, without the aid of any other remedy.

"Evidence of the Tonic Properties of Mercury in Health and Disease," by Edward L. Keys, M. D., Professor of Dermatology in the Bellevue Hospital Medical College, New York. Published in the Transactions of the International Medical Congress, Philadelphia, 1876.

"Mercury is not an evil. It is not debilitating, but tonic in health as well as in disease, when continuously used in minute doses."

This, however, is not the generally accepted opinion of the profession. It may, however, be shown, that mercury in minute doses is a tonic, and that mercury in minute doses has been in use in the profession as a tonic for very many years, and sanctioned by the highest authority.

Mercury, in minute doses, increases the number of the red blood cells, both in diseased and healthy individuals, as has been fully demonstrated with the hematimetre, and based on the counting of red blood corpuscles in over one hundred different specimens of blood, and which number has been much increased in more recent experiments.

Mercury, in small doses, acts as a tonic upon healthy animals, increasing their weight.

Mercury, in small doses, is a tonic to individuals in fair

health; in such individuals it increases the number of the red blood corpuscles.

All are familiar with the well-known tonic, consisting of a minute dose of corrosive sublimate in compound tincture of bark, which may be traced back to the teachings of the late Valentine Mott and Sir Astley Cooper.

Mercury, in minute doses, is a tonic in all cases in which it can be digested, and that this tonic action must have had much to do with establishing the professional confidence in former days in the so-called alterative medication.

While, then, all the evidence goes to show that minute doses of mercury are tonic, out of disease as well as in it, the proof is equally strong that mercury, in large doses, is debilitating, if at all continued, whether in disease or out of it. This is proved by history, by clinical experience, and by actual blood-counting with the hematimetre, as has been shown by all investigators of the subject.

NOTE.—No report from Committee on Obstetrics and Diseases of Women and Children, and Section on Medical Jurisprudence, Chemistry and Psychology, the latter owing to the illness of Dr. Charles Ganahl, Chairman.

REPORT ON THE PROGRESS OF SURGERY.

BY THOS. D. WOOTEN, M. D.

Mr. President and Gentlemen:

As Chairman of the Section on Surgery, I am expected to give a synopsis of the progress of surgery since the last report from this Section. I find it to be a difficult task to perform. I have no means of collating the advancement made in this department within the bounds of this organization. We have no medical journal, or literature on this subject from which to elaborate a report. To make a report from the surgical field at large for the last year would be a herculean task, if it were possible to isolate the advances of this year from the previous years. For it is well known to you that the discovery of facts and the establishment of principles in surgery are not the discovery of a day, or a month, but rather the result of years of study, and combined researches of the many colaborers in the art and science of surgery. To the sagacity of William Harvey is accredited the discovery of the circulation of the blood; yet how nearly was it discovered for half a century by other anatomists before his time. It needed but the additional link to complete the chain of observation which unfolded to the medical world the most wonderful discovery of any age. So it has been in almost every important advance or progress made in surgery or medicine. Since it is only through the test of oft-repeated experiment and observation that facts can be arrived at and principles established in medicine, you will excuse me therefore, in the limited space allowed me, in attempting to refer only in general terms to that which appears to me to con-

stitute some of the advances and progress being made in this department of medical science.

The researches of modern pathologists have greatly increased our knowledge of the phenomena and essential nature of the inflammatory process. There still remains much, however, that is unexplained and profoundly mysterious. It is a process which bears such a close and practical relation to the art and science of surgery, I will be pardoned for calling your attention again to it in this paper, as in a former one.

Whilst the disturbances caused by inflammation are frequently a source of much danger to life, it is not always to be regarded as a diseased process. It may often need the guiding hand of the surgeon, yet the design of inflammation is not destructive and mischievous, but benevolent. The present conservatism and greatest modern advancement made in the department of surgery is intimately connected with the knowledge of its being a conservative and reparative process, and not a destructive one, to be treated as a raging demon and be struck down at once, no matter what the risk in striking. The doctor is no longer aptly to be compared to a blind man with a club to cut down the disease or the system. "More correct notions now obtain. The process having been closely followed up by so many industrious and earnest laborers, and tracked to its remotest retreats, and found to be more a physiological than a pathological process."

It is a significant fact to observe that in the very class of cases in which we find inflammation assuming a destructive and ill-controlled course, it is under circumstances of lowered vitality and impaired condition of system, and the result of a retrograde action. We are not sufficiently well acquainted with the actual processes of nutrition to enable us to understand the relations positively existing betwixt the tissues and the blood supply, consequently cannot know the mode in which changes commence and are wrought in disturbing the relation of the

ammatory process. Whether there
ion of the enervation of the blood
us-cularity and cell formation outside
ther the starting point existed in the
nich controlled vascular supply, is not yet
only theorize. There are reasons, however,
blood vessels have not only their vaso-motor
from the organic nervous system, which pro-
tion of the blood vessels, but that there are cere-
nerves supplied to the coats of the vessels that
e contractile action of the vaso-motor nerves, and pro-
dilatation of the vessels. Consequently, when a part is
vised, and the relative action of these trophic and vaso-
tor nerves are brought into functional activity, heightened
and increased nutrition, in the highest degree, is the result. It is in the relation of the tissue to these nerves we see the beginning of inflammation, but what the initial step is remains unknown.

Connected with these vital qualities or functions of the coats of the blood vessels, we are to account for the inflammatory changes of dilatation, increase of blood-flow, retardation of the flow, the ultimate stagnation, and the cell formations that occur outside of the capillaries.

It is the recognition of these facts, and the observance of these phenomena that is leading the modern surgeon away from the old phlogistic idea in regard to inflammation, and is causing him to depart from the teachings of his professional fathers, and to discard from his therapeutics the depressing and exhausting agents once so popular, and no less potent of evil. The modern surgeon's attention is directed to those agents that control vascularity by their direct or indirect action upon the heart and blood vessels, by increasing or lessening blood pressure by agents that control tissue change, hence calorification by agencies that affect calorification by direct abstraction,

or by bringing the blood into the cooling regions of the circulation. "The patient is, as it were, bled into his own vessels," by increasing the general vascular area. All agents whose therapeutic action is to dilate the blood vessels achieve this end. The more the blood vessels are dilated the less the blood pressure upon the inflamed part. All the good effects of venesection may be gained, while the blood is retained in the organism, available for future needs.

Reduction of temperature is a decided indication in the treatment of inflammation; and increase of temperature must depend upon one of two causes: 1st, increase of heat production; 2d, decrease of heat loss; or the two may be combined. In the first instance agents are indicated whose action prevents tissue change, consequently lessens heat production. In the second case, agencies are indicated whose action increases the bulk of the blood in the heat-losing area, and sets up perspiration with its cooling effects.

The reduction of pain in inflammatory action is important, as it is known that pain raises the blood pressure, except when it amounts to shock. By relieving pain, nerve activity is also lessened.

TRAUMATIC FEVER.

The origin, nature and causes of traumatic fever is a subject of so much importance in practical surgery as to demand a notice in this paper, especially since the recent attention the subject has received, and the modified views at present entertained.

The inflammatory process involves as one of its necessary results the generation of heat in the blood of the inflamed part. When that is limited and not of vital importance, the amount of heat evolved is easily gotten rid of by transpiration through the skin and lungs. If, however, the inflammation is extensive

and involves highly vitalized parts, the heat is not so readily disposed of; the whole volume of the blood rises in temperature, and the phenomena of fever are developed. This is the simplest form and the accepted theory of surgical fever, and one that has long been recognized. It is claimed also that overheated blood, circulating through the nervous centres, disturbs the chief functions of respiration, circulation, etc., and that these reactionary effects are important factors in the production of fever. Whilst all this may be true and be freely admitted, the daily experience and observation of the surgeon forces him to the conviction that there must be other agencies that operate outside of these heat-producing factors, for the reason that the rise of temperature does not always bear any sort of relation to the magnitude and extent of the local inflammation. On the contrary, a limited and a very insignificant amount may excite a very elevated and destructive degree of blood-heat. We have therefore been driven to the necessity of looking for some other source of febrile action. The recent researches and observations furnished by Belrath, O. Weber and others, furnish additional and more important factors in the pyrogeneous effects of the products of inflammation and decomposition upon the blood; that in inflamed parts some of the tissues are destroyed and new tissue formed, and that some of the products of this destruction enter the blood through the blood vessels, and may be partly through the lymph vessels; such material acts as a ferment and excites changes in the blood, by which heat is evolved. Likewise the blood changed by taking up the products of irritation might prove irritant to the centres of the vaso-motor nerves, and thus cause increased heat production. These experimentors found, by injecting an infusion of the products of inflammation into the blood of animals, they have high fever, and die with symptoms of debility, somnolence, and not unfrequently with bloody diarrhœa. The same results followed the use of fresh pus; a weaker effect

from pus serum, pressed out of an inflamed part. They found further, that these effects were not confined to the direct products of inflammation, but that febrile reaction followed the introduction into the circulation of various agents, and that there are no specific fever-exciting substances; that the chemical substances resulting from the decomposition of tissue had fever-exciting effects; such as sulphuretted hydrogen, sulphides of ammonium and carbon, etc. It was further shown that the products of inflammation and decomposition were taken up and produced these pyrogenous effects when injected into the tissues.

These facts and observations have an important therapeutic value to the surgeon, and suggest that everything be done which favors union with the least amount of suppuration and as perfect an immunity from putrefaction as possible, and that the bloody serum and products of inflammation have complete drainage.

There is no specific treatment for traumatic fever beyond sedulous attention to the general state and well-being of the patient. The tonic effect of pure, fresh air, pure and uncontaminated water are indispensable auxiliaries to a favorable termination. Its prophylaxis is a matter of very great importance, and doubtless is nearly connected with the proper management of the wound, the dressings, etc.

This brings up the vexed question, how wounds are to be managed and dressed to be properly done. It would be mere dogmatism in this paper to attempt to settle this question, since a careful and scientific observation from the days of John Hunter to the present time leaves surgeons further from agreeing as to the best mode of treating a simple incised wound than existed in the time of Machaon. One distinguished surgeon, Prof. Liston, sees in the atmospheric air the universal medium of contagion, the vehicle through which all germs of corruption reach wounds, and devises antiseptic dressings as a means of

preventing traumatic fever. Another, Dr. Humphrey, teaches that wounds do best when freely exposed to the air, without any material of dressing whatever. A third, Sir W. Ferguson, after more operative experience than any surgeon of his day, repudiates all special modes of dressings, but thinks wounds do better with simple water dressings than any other. Such is the diversity of opinion on the subject. Without involving any adhesion to the germ theory of disease, I think it must be conceded that Prof. Liston's dressings have grown in favor, and in some modified form are more generally in use. Prof. Liston has recommended lint, saturated with boracic acid, to be applied as a substitute for carbolic acid, being less irritating and equally efficient. Salicylic acid, chloral hydrate, and chloride zinc have their advocates as antiseptics. But however putrefaction may be produced, there remains little doubt that such agents do stop it.

As an internal remedy, to stay tissue change and allay febrile action, etc., quinine is more relied upon than any other agent in traumatic fever.

FRACTURES AND THEIR TREATMENT.

Nothing of very special or novel interest presents itself on this subject, yet it is quite evident that great changes have ensued within the last quarter of a century in the management of this class of injuries. Every surgeon of many years' experience cannot avoid observing the present simplicity of treatment compared with the complex paraphernalia and the multiplicity of apparatus in use twenty-five or fifty years ago. The study of fractures, and the acquirement of a knowledge of the various appliances, of extension and counter-extension, etc., constituted a vast as well as vexed field to the student of surgery. And when he felt prepared to enter upon the arduous [illegible] of his calling, nothing probably presented to his mind a

more fearful responsibility than the management of his first case of fracture. I would not be understood as underrating the care and skill required in the management of this class of cases, but rather would call attention to the fact that a better knowledge of the subject has greatly simplified the treatment without abating in the least the responsibility, the care, attention and skill of former days. Extension and counter-extension in fractures of the lower extremities remains still a somewhat vexed question. That it is indispensably necessary to overcome muscular contractility cannot be claimed for them in all cases. It has, indeed, become the question whether or not they cannot be dispensed with as factors in the treatment, in all cases of fracture receiving the early and prompt attention of the surgeon. It is a question in my mind whether the benefit derived from Sayre's plaster jacket, in the treatment of spinal disease, is due so much to its extension effect as to the complete physiological rest it secures, by fixing the ribs and relieving spasm of the spinal and abdominal muscles. The suspension apparatus places the patient in a favorable attitude for the surgeon, and at the same time brings more nearly into proper position the antagonistic relation of the muscles, and thereby aids in securing immobility and abolishes pain, a very depressing and morbific element in the diseased action.

We may conclude, however, that extension and counter-extension is not accepted as being indispensable, or at all times necessary to prevent shortening in fractures. When required it is often in consequence of delay in suitable dressings, resulting in undue irritability and spasmodic shortening of the muscles, to overcome which we have in the weight and pulley for extension, and position for counter-extension, about all that is requisite to obtain apposition, which may then be permanently secured by plastic dressings, or well-adjusted and padded splints.

The indications of treatment in fractures are, first, place the

fractured bones in apposition at as early a moment after injury as possible; second, keep them in apposition by immobilizing the parts, by applying, first, cotton batting, then plastic material, or well wadded splints of deal board, the latter preferred to curved or other forms of splints. The dressings, when practicable, should be applied under an anæsthetic. The joints contiguous to the fracture should be secured by the dressing. Instead, therefore, of the complex apparatus in use years ago, the bandage, cotton batting, plaster of paris, or eggs and flour, starch, or liquid glass, deal boards, adhesive plaster and pulleys constitute about all the material required by the modern surgeon in the treatment of fractures. Upon the skillful adjustment of the same depends his success rather than the kind used. But I feel that I am authorized in saying, for several reasons, the plaster of paris dressing, skillfully and carefully applied, is to be preferred, as a general rule, to all other methods of treating fractures, and should always be applied as early as possible after the injury, and should be most attentively watched, lest undue pressure should supervene. Wadding the limb evenly and well before applying the plaster bandage affords security against undue pressure and injury to the soft parts.

DISEASES OF THE JOINTS.

The present views entertained of the nature and treatment of this class of diseases constitute quite a modification of those held by surgeons of only a few years ago. This change consists essentially in recognizing the important indications of treatment in securing complete rest to the joint, and perfect freedom from pressure of the inflamed articular surface. Success in the management of chronic arthretic disease of that form or character formerly regarded as strumous, depends in a remarkable degree upon the skill and ingenuity with which we

accomplish the above indications. The indications are recognized as the same, whether it be the spine, hip, knee, ankle, or the smaller articulations involved. The advances made and success attained in the management of this class of cases depend upon the recognition of the mechanical principles involved and the local nature of the disease, rather than loooking for and treating a constitutional vice, or diathesis, as a cause. The means and appliances for the fulfillment of the above indications have been greatly improved and simplified by the surgeons of Europe and our own country. By the extension apparatus, fixation and immobilization, etc., modern surgery has gained quite a triumph and humanity a great benefaction.

REPORT OF SECTION ON STATE MEDICINE AND PUBLIC HYGIENE.

BY A. R. KILPATRICK, M. D., OF NAVASOTA, CHAIRMAN.

The hope is entertained that a historical retrospect of this subject will not be deemed inappropriate, or labor misapplied, because we are aware that even members of the medical profession, in the mass, are not familiar with the subject, while laymen are almost entirely unacquainted with it.

IMPORTANCE OF THE CENSUS.

No progress has been made, or can be made in it, without statistical facts and data, gathered by constant and extended observation all over the State. The basis on which the system rests, is, registration of the births, marriages and deaths in every family, town and county in the State, with memoranda of the diseases and causes of the deaths. When it is ascertained that a plurality of diseases originate from any local cause, then measures can be adopted for its amelioration or removal. When a locality is found to be unhealthful, that the population die more in a certain place than in others, then efforts can be employed to improve its healthfulness. The same rule applies to occupations, trades, modes of living, articles of food, dress, buildings, furniture, etc. In fact, it embraces all the data which show the moral, social, physical and industrial condition of the people. Moses understood the importance and the value of the census of his people, and, in the Pentateuch, the enumeration of the people is repeatedly enjoined, and the most ancient statistical

record of the kind is that of the Israelites in the wilderness. There is also a record of a census in China, ordained by the Emperor Yee, 2,042 B. C., and of one in Japan, under the Mikado Sujin, in the last century before Christ. Under the constitution of Solon, the citizens of Athens were divided and registered. timemata, telee (τιμήματα, τέλη), into four classes, according to their taxable property, or income. The Roman census originated in the distribution of citizens into classes, effected by Servius Tullius, the sixth King of Rome, 550 B. C., in a most solemn manner, on the Campus Martius, where every citizen had to appear, and to declare upon oath his name and dwelling, the number and age of his children, and the value of his property, under the penalty of having his goods confiscated, and of being scourged and sold for a slave. In the sixteenth century the practice of keeping church registers of births, marriages and deaths, out of which grew the modern systems of recording the movements of the population, came into use. No exact popular enumerations were made in the seventeenth century, but in the eighteenth, great progress was made in the development of statistical science. In Russia, partial censuses were taken by order of the government, first in 1700; and as early as 1802 a "central bureau of statistics" was organized, showing the territorial extent and subdivision, the population, agriculture, commerce and industry of the empire. Afterwards other European governments adopted similar systems. As great benefits accrued from these meagre registrations, the subjects of inquiry were increased, and more minute details tabulated. The present system in Great Britain is considered the best in the world. The census is decennial; the kingdom is subdivided into 32,606 districts, to each of which a special enumerator is appointed; each district is less than two square miles in area, containing an average population of 696, and 131 houses. These tables embrace the name, age, sex, birthplace and occupation; the number of idiotic, deaf, dumb, blind, insane; the degree of education,

school attendance and religion of the whole nation; and also the live stock and agricultural census. The census is all taken in one day. Of course this embraces an enumeration of all in prison and the crimes for which they were incarcerated.

In our own country, the origin of the census may be traced to the colonial period, and has been ordained by the constitution, the first article of which prescribes a general enumeration of people within three years after the first meeting of Congress, and within every subsequent term of ten years thereafter. The first census was taken in 1790. The number of subjects of inquiry tabulated in our last census was twenty-two, and Ireland is the only country having the same *number*, although the subjects of inquiry differ. The object of the census is to develop those points that best show the *human status*, the measure of vitality; personal, domestic and social condition; to learn as nearly as may be the exact measure of all the elements of force in each individual, and know what and how much he has in himself, and can contribute to the sum total of national power and wealth.

Another feature of our subject is best illustrated by the Hebrew economy established by Moses in the wilderness. He, no doubt, acquired his knowledge of hygiene in the course of his early education, and his intercourse with the priests and the nobility of Egypt. It is immaterial whence his knowledge was derived; we are forced to acknowledge that the rigid enforcement of his rules added greatly to the health, longevity and prosperity of the Hebrew nation. In all ages of the world they have been a remarkable people; and even now we all know that Jews are more healthy than other civilized people; fewer children die amongst them, and their vital statistics show more old people than the Gentiles. It is unnecessary to enumerate the articles of regimen laid down by Moses, as you are all familiar with them. Their fastidious cleanliness, their abstemiousness, their temperance and sobriety, are all shown by their healthful-

ness, their morality, their immunity from crime, arrest and imprisonment. Viewing them as high exemplars of the benefits of hygienic rules, we are led to a belief in the propriety and utility of sumptuary laws, enacted and enforced by the State. The healthy condition of that people is a strong argument in favor of State superintendency of the sanitary regulations of the people. The separation of the infected and diseased, their purification of the parturient and puerperal woman; their frequent ablutions and fumigations, show their familiar knowledge of contagion, infection and malaria, and the means of security against them. See Leviticus, ch. xiii, xiv, and Deut. xxiii, 12-14.

Long after Moses, these laws were rigorously executed, and when the crusaders occupied Jerusalem, they established outside the city an isolated place for the treatment of contagious diseases, called the Hospital of St. Lazarus, whence the word *lazaretto*. And this brings us to a consideration of Quarantine and Hospitals.

QUARANTINE AND HOSPITALS.

Quarantine in Europe dates from the end of the thirteenth or the beginning of the fourteenth century, when leprosy prevailed in Italy and France. A military expedition, returning from the Holy Land, brought with it the Egyptian plague, which was looked upon as a new disease, and excited an unusual degree of attention, from its great mortality and contagious character. It was soon discovered that those who avoided the sick escaped the disease. The first quarantine regulation originated with Viscount Bernabo, of Reggio, in Italy, and is dated January 17th, 1374. Yet the authorities of Florence are said to have used occasional precautions as early as 1348; and the Emperors of the East had prescribed measures against those who arrived from places where plague prevailed, and it was at that time that the space of forty days was fixed to observe them. In the

course of time the benefits of these precautionary measures were understood, and about the middle of the fifteenth century a well-defined legal code was adopted by the Venetian government when their commerce was at its highest point. At a later period, the Republic of Venice established

THE FIRST "BOARD OF HEALTH,"

consisting of three nobles, who were appointed by the Grand Council. They were called the "Council of Health," and were ordered to investigate the best means for preserving health, and for preventing the introduction of disease from abroad. The efforts of this council not being entirely successful, they were invested, in 1504, with the power of life and death, and there was no appeal from their sentence .During the prevalence of plague in Italy, about 1527, *bills of health* were first introduced, and in 1665 they had become general. Quarantines and lazarettos began to multiply along the shores of the Adriatic, and other nations established similar laws.

In England, though certain preventive regulations had existed from a very early period, no regular system of quarantine was enforced until about 1710, when plague was raging in the towns on the Baltic Sea. During the dreadful plague of Marseilles, in 1720, the British government appointed the celebrated Dr. Richard Mead to draw up quarantine regulations. Parliament, approving his suggestions, repealed the act of 1710, and passed an act establishing quarantine throughout the commercial kingdom.

Yellow fever visited Philadelphia in 1699, and in 1700 the General Assembly enacted

THE FIRST QUARANTINE LAW

in this country, imposing a fine of one hundred pounds for every unhealthy vessel that landed. The other colonies subsequently

passed similar laws, and the U. S. Congress passed an "Act respecting Quarantines and Health Laws," approved Feb. 25th, 1799, which still stands upon the statutes. In 1830–1831 Asiatic cholera rode over all quarantine restraints, and these barriers being deemed antiquated, reforms were suggested. On August 18th, 1847, a royal ordinance of France declared the first recognition of the truth, based upon the opinions of medical men, that many of the restrictions of quarantine were unnecessarily burdensome, and therefore they were abolished. Still other reforms were established by decrees of Aug. 10th, 1849, and Dec. 24th, 1850. Dupeyron suggested the idea of a sanitary Congress. A convention ef delegates from the principal countries of Europe met in Paris, in 1851, and proposed an international code of quarantine laws, which was ratified by the nations represented. On the approach of cholera, in 1865, the French government called an International Sanitary Conference, at Constantinople. Since that discussion, quarantine has been established on a scientific basis, and more in accordance with modern notions of liberty and justice.

Several periods may be distinguished in

THE HISTORY OF QUARANTINE.

In the earlier ages, *at first*, people, seized with terror, became panic-stricken; they wanted to be protected at any price or sacrifice. During this period of superstition and terror, plague-stricken cities were burned; the sick were left alone to die; the shipwrecked from a suspected port were refused assistance, and physicians, afraid to approach their patients, threw bistouries at them from a distance, in order to open their buboes. The *second* may be called the period of reaction. The atmosphere was considered as the vehicle of epidemics, and was supposed to transmit diseases to a great distance. Going to the opposite extreme, quarantines were declared useless. The

cholera of 1830 furnished new arms to the adversaries of restrictive measures. The severe quarantines and cordons organized on a vast scale in Russia and Prussia and other parts of central Europe, applied in the midst of dense populations, became mere propagating agents. With the Conference of Constantinople the question enters on the *third*, or scientific period, when the true principles of international hygiene became established. Why the term of forty days was fixed upon as a proof of whether people were infected is not very clear. Some say it was chosen merely from superstitious notions, because people were accustomed to it in Lent; others, that it arose from the doctrine of physicians in regard to the critical days of many diseases. In recent years, several countries where

THE CATTLE PLAGUE

is regarded as exotic, have enacted laws to prevent its spread, and an act of the British Parliament is believed to have prevented its spread. France, Holland and Turkey have similar laws, only more stringent. The U. S. Congress passed a similar act, which was approved 18th December, 1865, and an act amending this, March 6th, 1866. Several of the States also have laws against the importation of diseased cattle from Texas. Infected vessels now are required to be cleansed, disinfected, fumigated, and subjected to detention about ten days.

Many intelligent, scientific observers have not only suggested

SWEEPING AND RADICAL REFORMS

in quarantine, but have questioned its utility, and recommended its entire abrogation. In England, the General Board of Health, after close investigation, propose the entire discontinuance of quarantines, substituting for them a strict code of International Hygienic Regulations, and they unhesitatingly assert that quarantines are no public security. The doctrine of a specific con-

tagion, so universally received when quarantines were first established, has lately undergone almost an entire revolution. Objections to new and more comprehensive measures of protection on the part of the general government of the United States cannot now be raised, as in the days of President Jefferson, who, in 1804, protested against the adoption of a code of laws to prevent the introduction of yellow fever. The Conference at Constantinople, although establishing the true principles of international hygiene, was occupied exclusively with their application to cholera. It is proposed that any resolution adopted by a future convention should have for their common end the preservation of the healthy individual, and be founded upon a different principle, viz., to regulate the isolation and sequestration of the human species, and to systematize the destruction of animals.

REFORMERS AND PHILANTHROPISTS.

John Howard, the philanthropist, exerted a great reformatory and improving influence on the world by his course of life, and by his writings. His career shows what is necessary to jostle the minds of men and of nations from a beaten track, and cause them to strike out new courses. Terrible epidemic diseases, conflagrations of cities, overflows of vast tracts of country, and devastating wars have done a great deal of good in this way. John Howard was a youth possessing a large fortune, and willing to do something for the amelioration of those in distress. He embarked for Lisbon, with the design of relieving the miseries caused by the earthquake of 1755, and on his voyage was captured by a French privateer, was cast into prison where he was detained long enough to excite his lasting sympathies with prisoners, and to impress him with the necessity of a reform in their treatment. After his release he devoted his fortune, his time and his labors to prison discipline and prison

reform in different parts of the world, taking the gauge and dimensions of misery, depression and contempt. He also visited hospitals and lazarettos, where he was exposed to disease and infection, and died at Cherson, on the Black Sea, in 1790.

Adam Smith, who wrote the "Wealth of Nations," lived at the same time, and his fundamental idea was, that the *labor* constituted the chief source of a nation's wealth; and this necessarily required good health. Thomas Robert Malthus was contemporary, who wrote on "The Principle of Population." James Mill, about the same time, wrote on political economy, and Jeremy Bentham published his "Panopticon," advocating reforms in prison discipline. The American

REVOLUTIONARY WAR WAS CONTEMPORANEOUS,

soon followed by the bloody wars of the first Napoleon, in which all Europe was engaged. About the same time Edward Jenner made the discovery of the prophylactic power of vaccination with the *variolæ vaccinæ*, which was published in 1798, and produced a great revolution in the prevention and management of small pox, for which he was rewarded by Parliament with the gift of $150,000. The contemporaneous advances and discoveries in chemistry, in the constituent properties and ingredients of water and of air; the discovery of the identity of lightning and electricity; the great improvements in surgery, in gynæcology, and the large additions to the medical armamentarium, pushed forward the car of progress with powerful impetus. It needs no labored argument to show that all history is a progressive chain of causes and effects, the complex facts of each generation being caused by that which preceded it, and moulding that which follows it.

Giambattista Morgagni, the eminent Italian anatomist and pathologist, in fact the founder of pathological anatomy, lived and wrote his celebrated works between 1715 and 1762; taught

in the famous school of Padua immediately after Valsalva, and helped to displace the vague theories and superstitious beliefs in medicine, and establish it on a more rational basis. The celebrated William and John Hunter flourished from 1740 to 1793, and their herculean labors urged on the car of progress and made impressions on medical science which are still visible in our day.

Peter Charles Alexander Louis, of France, the originator of "the numerical method," began his career as a reformer in science about 1820. He is particularly distinguished for having first brought prominently into notice the importance of *medical statistics* as a means of acquiring information as to the characters, causes, phenomena, and particularly the *mortality of disease.* He declared that the impressions received by the individual practitioner from observing and recollecting isolated cases were often imperfect or deceptive; and that genuine and trustworthy knowledge could be gained in medicine only by counting a large number of similar cases, and recording accurately the proportion of those in which each particular symptom or event occurred. This is known as the "numerical method," and has exerted a great and beneficial influence on modern scientific medicine, and helped to convince physicians and others of the important benefits arising from medical and mortuary statistics. Dr. Henry I. Bowditch, of Boston, in his able address on Hygiene and Preventive Medicine, delivered before the International Medical Congress at Philadelphia, in September, 1876, says: "Louis may be considered the lineal scientific descendant of such men as William and John Hunter, Morgagni, etc. His nature rebelled against the dogmatism of the past, unsupported as it was by well-ascertained and recorded facts. You all know the great and widespread influence of his works in Europe. Broussaism fell before them. The epoch of improvement in America commenced when Dr. Gerhard, of Philadelphia, and Dr. James

Jackson, Jr., of Boston, and other pupils of the observation school, returned to America. Drs. Gerhard and Jackson had high mental powers, finely cultivated. Both came back devoted friends, and admirers of Louis as a man and as a medical reformer. They were full of the new ideas, and enthusiastic defenders and expounders of them. The influence of these ideas on the currents of medical thought in America was immense. It extended gradually over the whole country." If the influence of the teachings of Louis was so great in America, how much greater must it have been in France, England and other parts of Europe, so much nearer to the field of his work, and so much better prepared to receive and adopt them. The teachings of Louis swept away all false systems, unsupported by well-recorded and sufficiently numerous facts. The "numerical method," and the direct and indirect influence of his writings are considered the guiding power at the present time in Europe and America. The mottoes selected by Louis as his guides are identical with those of modern science.

The reforms in Hygiene and Preventive Medicine were not all fostered and promulgated by physicians, as we will see in the case of Edwin Chadwick, an English reformer and statistician, whose life has been devoted to sanitary reform and the prevention of pauperism. He published important articles on "Life Assurance," and a paper on "Preventive Police," in 1829. He was appointed, in 1834, secretary of the poor-law commission, and continued in that office until 1847. From masses of evidence collected for this commission, he prepared a "Report on the Sanitary Condition of the Laboring Population of Great Britain," in 1842, which produced a great sensation. In consequence of this sanitary movement, a "public-health act" was passed in 1848, and a general "Board of Health" was appointed, of which Board Mr. Chadwick was a member from 1848 to 1854. No public man of the present day is more justly an object of general attention and interest than Edwin Chadwick. It would

be difficult to mention another public man possessing so preëminently the passion and genius of rectification. It was through his influence, or his work, that the first *State Board of Health* in England was established, in 1848, which marks an epoch in Sanitary Medicine.

Dr. John Forbes, an eminent British physician, born in Scotland and practiced in London from 1824 to 1861, was also a leader in hygiene, both public and private, with a view to preventing disease on a large scale, and believed that in that the surest and most glorious triumphs of medical science are achieving and to be achieved. In our own country, Dr. Elisha Bartlett, a native of Rhode Island, and who practiced and taught in several different States, and exercised a controlling influence North, East, South and West, considered that, "to find out the best methods of preventing, of modifying as well as curing disease, is the great mission which lies directly before us." His work on "The Philosophy of Medical Science," was deservedly popular, and exerted a sound and beneficial influence on the profession. He died in 1855.

Prominent foreigners of the present day in the ranks of Hygiene and State Medicine are Quetelet, of Belgium; Max Von Pettenkofer, of Munich, Bavaria; Virchow, of Berlin; Parent du Chatelet, of Paris, who died in 1836; while in our own country we have Dr. George Derby, Dr. Edward Jarvis, Hon. F. B. Sanborn, Lemuel Shattuck, Esq., and Dr. H. I. Bowditch, of Boston, Mass.; Dr. Henry B. Baker, and Dr. R. C. Kedzie, of Michigan; Dr. Elisha Harris, of New York; Dr. J. G. Thomas, of Savannah, Ga.; Dr. C. B. White and Dr. Sam. Choppin, of New Orleans, La.; and many more besides, who are laboring actively in the cause.

A NEGLECT OF THE MEDICAL PROFESSION.

The medical profession, as a body, has heretofore taken very

little interest in Hygiene and Preventive Medicine. There have been very few sanitarians amongst us until very recently. This has been owing, in a large measure, to the absence of any leading instruction on the subject being imparted by the medical colleges. Within a few years there has been a great improvement and advancement amongst them. There are State Boards of Health in the sixteen following named States, viz.: Alabama, California, Colorado, Georgia, Illinois, Louisiana, Maryland, Massachusetts, Minnesota, Michigan, Mississippi, New Jersey, North Carolina, Tennessee, Virginia and Wisconsin.*

We now quote from the Centennial Address of Dr. H. I. Bowditch, his summary of the influences at work, and the present status of State Medicine and Public Hygiene:

"The papers published more recently by several of the State Boards of Health have tended to interest the whole community on the subject of public hygiene. The number of single laborers in the field is daily augmenting. The U. S. Government, by its army and navy publications, previous, during and since the war, has done a vast sanitary work. The library and museum in the Surgeon General's Department at Washington, commenced during the war, are also valuable in the same direction. If they be hereafter thoroughly sustained by the Government, we cannot estimate the great advantage that will arise in all departments of medicine, and in none more than that of public hygiene. As the Crimean war taught the world very much in reference to this subject, so our war, dreadful as it was to both parties, was the means of bringing into life several most beneficent institutions, which were never before thought of, or at least never carried out on so grand a scale. I allude to the Sanitary and Christian and Western Sanitary Commissions, of the North; to the Wayside Hospitals, Christian Relief Associations and State Hospitals, at Richmond, Va., and others at the

*Since writing this, the Kentucky Legislature passed an act on the 15th of March, 1878, organizing a State Board of Health.

South. Through these, money and food were distributed without stint to the sick and wounded, often to foes as well as friends, wherever found, either on the battle-field or in hospital. We can never know how many human lives were saved, or how much torture prevented, by the agents of these noble institutions on both sides of the line of battle. But we can estimate how much the desire to save life, prevent disease, and promote health, and to provide some of the means for so doing, were, under their blessed influence, instilled into the minds and hearts of our people, from Maine to Texas.

"Great strides in Public Hygiene were also made during the war by the fact that the people outside the military lines, and the officers and soldiers within them, very soon began to learn, by dire experience, or by the urgent appeals of experts in sanitary matters, the all-important advantages of cleanliness, sobriety, pure air, and strict methods of action, as opposed to the distress consequent on filth, intemperance, foul air, and chaotic rule; and we cannot doubt that every surgeon, whether Northern or Confederate, who served during the war, became more practically versed in the advantages of *prevention of disease* than he was before. All that knowledge is now brought back to civil life.

"The National Quarantine Conventions had also important influence. Four were held before the breaking out of the war, viz., in Philadelphia, 1857; in Baltimore, 1858; in New York, 1859; and in Boston, 1860. From the eminent persons engaged in them and attendants at the meetings, and the character of the papers published, there can be no doubt that they contributed very much to lead the public mind to the ideas prevalent at the present time.

"In April, 1872, was held the primary meeting whence has sprung the success of the National Quarantine Conventions above alluded to, that is, The American Public Health Association, which has held meetings in New York, Philadelphia, Cin-

nnati and Boston. Able papers have been published by it on arious sanitary matters, on the transmission and prevention of lisease, on quarantine, hospital hygiene, longevity, etc.

"The American Social Science Association has of late years done much valuable work in the same direction.

"Among the more strictly professional institutions that have helped forward the cause of Public Hygiene and Preventive Medicine may be named the American Medical Association. In 1847 this Association was instituted, and almost from its inception it has annually published papers relating to our subject, and still more recently very earnest efforts have been made by some of its members to obtain a definite National Health organization from the United States Government. The frequent intermingling of men, brought about by this Association, from all parts of the Union, has contributed to the same end. It must be confessed, however, that, judging from the small number of members attending the Section on Hygiene, that subject seems to afford less interest than any other.

"During the past five or six years there has sprung up in many parts of the country a wide-spread thoughtfulness about the necessity and value of hygienic measures. Almost all persons, in their various spheres, have become more accessible to the protests of the sanitarian. Still farther, it may be asserted that, during the last ten years, more practical work has been done among the people, tending to prevent and crush out disease, and more valuable papers written illustrative of Public Hygiene, the world over, than since the Christian era began. In every State there are active and earnest laborers in this field, and their number is daily increasing. It would be impossible to name even a tithe of them. Some States, in their corporate capacity, have sustained these workers for the public good. But a large majority of the States and Territories are not yet sufficiently enlightened to appreciate the duty devolving on them to be careful of the health of their people."

Having thus briefly summarized the history of our subject, we beg leave to enter more minutely into a consideration of the most important causes of disease and the means best adapted for their removal and prevention.

It is with much embarrassment we undertake the task, as we sincerely regret that the great majority of our professional brethren in this State, the mass of our fellow citizens, our legislators and our state officers have rendered us very little aid in this work, and seem to care more for county fairs, cattle shows, the accumulation of money and property, than they do for the public health, and cannot feel "that the worst prodigality is the waste of human life, and that mere money is as nothing in comparison with the great boon of perfect human health." They forget that health is the laboring man's capital, and the promotion of health is true economy. It seems to be a difficult lesson to learn, that the prosperity of a town, city or State stands in immediate relation with its sanitary condition. That there is a community of interest between the individual and the State of which he forms a part; and while the latter is required zealously to watch over all the conditions of the health of its members, as the basis of its corporate prosperity, the individual ought always to seek the promotion of the well-being of himself and neighbors, as an essential condition of his own welfare.

"This mutual relation, in respect of health between the individual and community was recognized, more or less, even in the remotest ages: a fact which is attested by the fables of mythology; by history, both sacred and profane; and, above all, by the impressive stories which are told by the ruins of Babylon, Egypt, Jerusalem, and ancient cities of Greece and Italy, wherein are found monumental works which rival the products of modern sanitary engineering, and point to the fact that those nations which attained the highest civilization, and wielded the greatest influence over their contemporaries, always exercised a caerful guard over their health. In succeed-

ing ages, when civilization declined and the unwritten period of barbarism was inaugurated, all hygienic laws were put at defiance in the general destruction which prevailed, and the sanitary lessons of the previous ages were lost, to be recalled in a measure only in the subsequent middle ages, when terrible epidemics cut off one-fourth of the population of Europe, and again more forcibly in the following centuries of luxury and squalor. In later years, when civilization has made such great advances, crude hygiene has developed into the more comprehensive study of the laws of disease as they affect large masses of human beings. Innumerable expedients have been adopted for the amelioration of disease and the improvement of health. The greatest minds have been devoted to the investigation of the origin of diseases, and inventive genius has been stimulated to the utmost. Yet we can hardly do more than did the ancients, namely, endeavor to keep clean, or, following the counsel of the wise Hippocrates—provide for pure air, pure water and a pure soil."

Amongst barbarous nations, and in the dark ages, it was believed that disease, pestilence and plague were the evidences of Divine displeasure, and the instruments of vengeance for the sins of the people; but in these days of intelligence, aided by the light of modern science, we understand better the laws of nature, and are enabled to trace all diseases to the non-observance, or wilful infraction of those laws.

Far back in history we are informed that the rulers of the people knew the benefits of cleanliness and the baneful agency of filth, and incurred great expense in constructing artificial sewers for the removal of filth from cities, and also supplied the inhabitants with water by immense aqueducts.

SEWERS AND SEWERAGE.

The system of sewerage, or drainage under the streets of

towns, for the comfort and health of thickly populated places, was well understood by the Romans, who at a very early period adopted a system of drainage in their famous sewers, which yet remain in use as monuments of their skill in engineering and workmanship. These included not merely the spacious subterranean vaults by which the drainage of the pestilential marshes about the city was effected, but also the wooden pipes, clay tubes, or drains of whatever kind, by which the impurities were conveyed from the houses to the main conduits. An elaborate system of sewerage has recently been discovered in connection with the Coliseum. So completely was the city underlaid by these passages, that it was designated by Pliny as *urbs pensilis*, a city supported upon arches.

The filth temple *(avaskara mandira)* of the ancient Hindoos, was beyond doubt connected with channels and receptacles for its accumulation. The great canal system of Egypt, executed under Rameses I., about 1460 B. C., and his successors, served extensive sewerage purposes; and probably also the the magnificent canals of Assyria and Babylon, fed by the Tigris and Euphrates. The ancient Chaldean tomb mounds possess great interest on account of their system of drainage. Long shafts of baked clay extend from the surface of the mound to its base, composed of a succession of rings two feet in diameter and about a foot and a half wide, joined together by thin layers of bitumen. The recent discoveries of Dr. Pierotti among the ruins of Jerusalem have shown that the ancient city contained a complete and perfect system of acqueducts, drains and reservoirs. The preservation of many of the aqueducts is owing to the fact that they were excavated in the solid rock, and have not been affected by the demolition of the structures above. It appears that the pool of Siloam received the washings of the Temple, and the liquid was used for the purpose of irrigating and fertilizing the King's gardens. The discoveries clearly show that the inhabitants were fully aware of the necessity of

speedily removing all decomposable, putrescible, refuse matter.

In Paris, France, sewers were constructed at a very early period. In 1356, during the reign of King John, they were improved and enlarged. At the present time there are over two hundred and fifty miles of sewerage in and under that city, mostly emptying into the River Seine below low-water mark. In many of the galleries there are railways, on which cars are run in cleaning the sewers. Any one wishing to know something of the size and extent of the Paris sewers is referred to an old novel, written by Eugene Sue, 1842, called "The Mysteries of Paris."

We may well suppose that the Romans, in the time of their rule in England, introduced a system of drainage, but the first official enactment is recorded in 1225, when the City of London was provided for, in the reign of Henry III.; and 1531 Sir Thomas More thoroughly revised the system in his celebrated "bill of sewers." Various improvements have been made at different times, and in 1875 London was regarded as one of the best drained cities in the world, the total length of her sewerage being over two thousand miles. The principal sewers are fourteen feet high and six and one-half feet wide. The two great mains each extend seven and three-quarters miles below the city, and the whole cost, together with what are called the intercepts and the pumps, is about $150,000,000.

Remains of drains and sewers and aqueducts are found in the mounds and other structures in Central and North-west America.

UTILIZATION OF SEWAGE.

The sewage of cities was formerly thrown away as useless, but as it contains ingredients which are appropriated by vegetation, several methods have been adopted with a view to its use as a fertilizer. Companies are organized who pay so much a

ton for sewage to the cities where they operate. Dr. Parks calculates that every thousand inhabitants furnish excreta to the amount of twenty-five tons of fœces, and 91,250 gallons of urine. In 100,000 parts of sewage there are 72.2 parts of solid matter, and 44.69 parts of matter held in solution. In the solid matter are 4.696 parts of organic carbon; 2.205 parts of organic nitrogen; 6.703 parts of ammonia; while of the parts held in solution, 24.18 parts are mineral, and 20.51 parts are organic. The various combinations of nitrogen and the salt of potash contained in sewage are what render it valuable. One hundred tons of sewage possess a market value of $4.25. The London sewers discharge fifty millions of gallons daily, all the year round, all of which is made use of. One of the most valuable elements found in sewage is ammonia. Every individual in a mixed population contributes annually to the sewage about thirteen pounds of ammonia in fœces and urine together, and this represents a money value of $2.10. Those cities which waste the sewage lose this sum *per capita* every year. It has furthermore been ascertained that the sewage is not only beneficial when used for fertilizing purposes, but furthermore, that where so used, there has been a perceptible lessening of the rate of mortality. In the town of Norwood, England, in 1865, the death rate was eighteen per thousand; by the utilizing of sewage since then, the death rate fell to twelve per thousand in 1868.

Money spent in the cause of Public Hygiene yields by far a greater per centage to the State than any other investment, as the results show clearly in other countries. In England, the results of careful inquiry made by Dr. Buchannan, show that in twenty-five towns where hygienic improvements were made by supplying better water, better sewerage and better-regulated town inspection, the death rate was lowered ten per cent., and the mortality from typhoid fever lessened 45.4 per cent.

Dr. W. I. Bowditch, of Boston, first discovered that damp soil and a lack of drainage is the principal cause of consump-

tion, and he is sustained by hundreds of observers in all sections; and that the drainage of wet soil of towns lessens that disease which destroys so many thousands. A long array of proofs could be adduced to show that fevers are often propagated by contaminated water and milk as well as by contaminated air. Recent observations show that cholera has been brought, in its origin and progress, under law, and we know how we could probably prevent it, if proper precautions were taken against its origin. A neglect of proper sanitary regulations tends to prepagate this scourge, year after year, in Europe.

THE PEOPLE TO BE INSTRUCTED IN HYGIENE.

It devolves upon us to point out the influence of the topography, geology and climate of the various parts of the State upon the health of its citizens; the important and intimate relations of drainage and sewerage to the health of families and whole communities; to call the attention of the people to the influence of various kinds of occupations, food, drinks, and clothing, as well as the structure of their public and private buildings and school-houses, upon the development of certain forms of disease; and most especially to point out the vast importance to the welfare and the perpetuity of the State; of properly rearing, training and educating the young; and to point out the nature and causes of epidemics, endemics and contagious diseases, and the means for their prevention or eradication.

It behooves us to educate the people in respect to

THE NATURE AND CAUSES OF DISEASES,

and the means for their prevention; to suggest appropriate legislation for compelling, when necessary, the use of those means, and to present arguments for such education and legislation, fortified and made cogent by facts—well-authenticated cases of

disease and death directly traceable to ignorance, neglect, or disobedience of the laws of hygiene; and to make it possible, by so doing, that many of the lives and much of the treasure now needlessly lost to the State may be saved.

It is shown by statistical tables, that in one hundred and seventy-five years the rate of mortality per thousand, in England has diminished from forty-two to twenty-five, which is attributable to various improvements in hygienic measures.

Dr. Boardman, Dr. Folsom and Dr. Jarvis, of Boston, have been at the trouble of

MAKING ESTIMATES

of the values of men's lives, and of the losses by sickness and deaths, in dollars and cents, hoping that, by considering the question in that way, the people generally would be drawn into a consideration of Public Hygiene and State Medicine. It is calculated that, even in the lowest walks of life, a child costs fifty dollars a year; at ten years of age he is worth $500, and at maturity $1,000, and the death of either of these is so much loss to the State. In 1871 the deaths in Massachusetts numbered 81,029, and it is estimated that the whole sum of their lives amounted to 292,762 years, which, at $50 per year, had cost $14,638,100, and was lost to the State. In the matter of sickness, it is also estimated that for every *death* there are two constantly sick, which implies a total average of 730 days of sickness and disability for every death. In Massachusetts, in 1870, there was a loss in the effective period equal to 276,461 years by premature death, and 24,553 years by sickness, making 301,014 years' loss of force in productive power in a single year. And these losses will continue until there is some change made for the better by hygienic improvements. It is estimated that two dollars a day per individual is the minimum average cost of sickness to the *working people*, in Massachusetts, from loss

of wages and the attending expenses. Multiply the number of working days lost annually by the two dollars, and we have, at the lowest calculation, $15,267,322; and the same computation applied to the *entire population* the amount is increased to $39,146,980.

Dr. Benjamin Lee, of Philadelphia, read a paper before the American Public Health Association, for the purpose of showing the cost of the epidemic small-pox which visited that city in the winter of 1871–2. The cost was $25,478,977.99; and he furnishes a table which shows that, by proper efforts in sanitary measures, the sum of $24,720,718.99 could have been saved.

The Report of the State Board of Health of Georgia for 1876 shows the cost of the epidemic yellow fever which scourged the City of Savannah that year, amounted in round numbers to $5,862,357. Dr. Ely McClellan, Surgeon U. S. Army, the writer of that report, pertinently remarks: "When those individuals who arrogate to themselves the positions of sanitarians open their minds sufficiently to absorb all the truths which each succeeding year of epidemics develops—when such persons submit themselves to draw conclusions from the grand mass of facts which may be obtained, and not from their restricted personal observation—when the financial prosperity of commonwealths is made subservient to the necessities of public health—when the interests of a few individuals no longer outweigh those of the masses—when the sanitary interests of communities are controlled by men powerful in knowledge, *rather than in politics*, then will a sanitary millennium dawn upon the earth, and widespread, devastating disease be unknown."

Many of us have witnessed

THE GREAT LOSS OF LIFE

and the blighting effects from epidemics of yellow fever in Texas, as well as from cholera and small-pox. In ancient times,

and also even in modern times, before the use of steamboats and railroads, communication and travel from one place to another were slow, and those epidemics which were conveyed by persons, or by families, spread slowly; but of late years they are spread more rapidly in consequence of more rapid communication and greater facilities of travel. These circumstances make it more obligatory on the medical profession and government officials to adopt measures, and enforce rules of hygiene for the suppression of disease and for its cure. But a few years ago, in consequence of the neglect of quarantine and public hygiene, many cities of the South, especially of Texas, were visited by yellow fever, which carried off hundreds of people, prostrated commercial interests, and blighted those cities so seriously that they have scarcely yet recuperated. In 1867 epidemic yellow fever devastated Navasota; a panic seized upon the people like that produced by the invasion of an army of Cossacks. All who were able to leave the plague-smitten place, did so in hurried disorder and precipitate flight. People residing in the country and towns adjacent refused the fugitives charitable or hospitable refuge, so that hundreds of the refugees were forced to live in the woods in temporary tents. They had already imbibed the virus of the fever; they were stricken down; medical aid could not be procured; the fear of the contagion frightened their fellow-creatures from rendering them any aid; the inclemency of the season increased their load of distress, and so scores of them died, who, under better circumstances might have been saved. In some instances, entire families were destroyed. In numerous instances, the heads of families died, leaving orphans to the cold charities of the world. At the time of the advent of the epidemic, Navasota was one of the most flourishing towns on the Central Railroad, with a teeming population engaged in prosperous business, large schools, full churches, and all the facilities of social enjoyment. Many who fled from the fever never re-

turned, a blight rested on the place, and it has scarcely yet recovered from the effects of that epidemic. It is impossible to arrive at a true estimate of the losses of the place by the epidemic, but it was not far from half a million of dollars.

Only a few weeks past, the town of Bremond passed through scenes somewhat similar, caused by small-pox. Waco also experienced a fright from the same cause. When we consider

HOW EASY IT IS FOR PEOPLE TO PROTECT THEMSELVES,

by vaccination, against small-pox, we are amazed at their carelessness, their apathy and blind indifference; nor can we feel that sympathy for the sufferers, we do for those who are assailed by yellow fever, because the one requires only personal precautions, whereas the other involves both personal and general measures. These instances, with many more of a similar character, show how necessary it is for the State, or municipal authorities to compel the people to be vaccinated at regular stated periods, and re-vaccinated to insure safety and exemption from small-pox. Each unprotected inhabitant who neglects, or willfully refuses vaccination, is a source of constant danger to himself, to his family, to his neighbors, and to the whole community; and a State has the right, as well as the power to institute at the hands of competent medical men

COMPULSORY VACCINATION,

for the full and equal protection of all her citizens. The true theory of a democratic form of government is the equal protection of the life, property and happiness of all alike by wise and just laws, and the absolute subjection of all, both the governors and the governed, to law. Compulsory vaccination, in that it protects all alike from pestilence, suffering and death, is truly a democratic measure, designed to bestow the greatest

freedom and the greatest happiness upon all alike, regardless of place, or position, or race.

Small-pox has prevailed in New Orleans ever since the late war, and in the last ten years there have been 33,449 cases there with 3,522 deaths from this disease alone. This is owing, in a great measure, to the 55,000 colored population, who suffer from the disease more than the whites, and a much greater proportion of them die, as is shown by the mortuary tables of 1877: total white deaths from small-pox, 437, with a total white population of 155,000; total colored deaths from same, 662, in a population of 55,000.

Before the enactments in England rendering vaccination compulsory, in London, one hundred years ago, and with only a fourth of its present population, the annual mortality from small-pox was about one-fourth of the total number of deaths from all causes, and the total mortality in England from small-pox averaged annually three hundred deaths out of every million of population. Since the practice of compulsory vaccination, this proportion has been reduced to less than two hundred per million. In Sweden, before vaccination was enforced, the average annual death rate from this disease was 2,050 out of every million; since, about 150 per million. In Westphalia, where the small-pox death rate used to be 2,643 per million, it has been reduced to 114. In Bohemia, Moravia and Austrian Silesia it has been reduced in like manner from 3,422 to 200. In Denmark, from 3,128 per million to 286; and in Prussia from 3,422 to 176. In Scotland and Ireland vaccination was made compulsory in 1864. In Scotland, for ten years previous, the yearly average of deaths from small-pox was 1,054. In 1865 it fell to 175. In 1867, to 124. In 1868, to 25. In Ireland, for the ten years previous to compulsory vaccination, the annual mortality from small-pox had been 5,800. From 1840 to 1850, 3,827. From 1850 to 1860, 1,272. In 1867 it was reduced to 20; and in 1868 to 19. In the war between France and Prussia, the Prus-

sian army, which numbered one million of men, lost 286 men by small-pox, while the French army lost by the same disease 26,000 men. In Prussia, vaccination and *re-vaccination* are made compulsory, while in France vaccination is only compulsory in infancy. In New Orleans, even now, the members of the Board of Health report numerous instances where persons and heads of

FAMILIES AVOID VACCINATION,

and resist all attempts made by those who are appointed to vaccinate. Ignorance and prejudice require the strong arm of the law to overrule them, and frequently we are made to wish for a return of the pillory and whipping-post to bring fools to their senses.

The marked difference in the sanitary condition of the colored population in slavery and freedom affords a very cogent argument in favor of legal enactment and official enforcement of rules of Public Hygiene. While the colored people were "chattels," they were of great value to their owners, and there was constant care taken of them, by furnishing them with comfortable dwellings, with good clothing, wholesome food, well cooked and regularly supplied; and their morals were also looked after more than now, and flagrant adultery or fornication were summarily punished; criminal abortions, fœticide and infanticide were rare, and always punished when detected. On plantations far removed from navigable rivers and towns, syphilis was scarcely ever known, and gonorrhœa was rare. All contagious and infectious diseases were scrupulously guarded against. All necromancy, witchcraft, conjuration and voodooism were strictly interdicted and punished if detected. In fact, patriarchal rule was exercised by their owners, and in cases of sickness the best medical skill was invoked, and in many instances more careful medical regimen and nursing were be-

stowed on the "chattels" than on the members of the white family. How is it now?

WHAT IS THE CONDITION OF THE COLORED RACE,

as compared with that of servitude? Then they were far more prolific than they now are—more prolific than the whites. Then the bills of mortality showed that fewer of them died than the whites. How is it now? The women now are applying to midwives and conjurers for abortives; applying to physicians for medicines to prevent conception; guilty of fœticide and infanticide everywhere and every day; killing themselves by intemperance, by lustful excesses, and sometimes perishing for lack of wholesome food; and filling jails and penitentiaries in consequence of willful infractions of the laws of nature, of the Government, and their Maker.

From the mortuary statistics of Charleston, S. C., there were, in 1874, still-births, whites 26, colored 147. In 1875, still-births, whites 35, colored 138. The black population of Charleston at that time was 21,440, and the white population was 26,969.

In 1874, in the same city, the total number of deaths amongst the whites was 718: one in 33.43. The whole number of deaths amongst the colored was 1,230: 1 in 21. In 1875 the whole number of deaths amongst the whites was 624: 1 in 39.30; the whole number of deaths amongst the colored, 1,240: 1 in 25.81.

The mortality, in the same city, amongst the whites, from pneumonia, was 17; amongst the colored 34. In 1875, from same disease, whites 20, colored 33.

The mortality amongst the whites in 1874, from consumption, was 57; colored, 144. In 1875, whites, 57; colored, 148.

From the Annual Report of the Board of Health of Mobile, Ala., for the eight months of 1875 from May to December, we have: total white population, 28,000; colored, 12,000. Deaths in that time amongst the whites, 340; colored, 278. Deaths

from consumption, whites, 36; colored, 46. Whole number from pneumonia, 14. Still-births, whites, 9; colored, 59. In the same city, for 1876, the population remaining the same, for the whole year, deaths from consumption, whites, 62; colored, 85; pneumonia, for both, 93; still-births, whites, 30; colored, 63. Total deaths, whites, 480, being 1.07$\frac{1}{7}$ per cent; colored, 640, being 5.33$\frac{1}{3}$ per cent.

From the Annual Report of the Board of Health of Washington City, D. C., for the first four months of 1872: deaths from pneumonia, 75; consumption, 97. The total deaths were 734, of which the colored were 258, or 35.14 per cent. Still-births, 57. Total population in 1870, 109,199, of which the colored were 35,455. The report of the same board for 1876 shows deaths from consumption, whites, 306; colored, 289; still-births, white, 143; colored, 236, being 9 less than in 1875. Total population, 133,000. "The total number of deaths from constitutional diseases was 947 (16 more than in 1875). Of this number 451 were white, or 0.391 per cent. of the white population, and 496 were colored, or 1.122 per cent. of the colored population, showing that in this community there is nearly three times as large a per centage of deaths from constitutional maladies among the colored as among the white population." (Dr. D. W. Bliss, Registrar of Vital Statistics.)

In that city,

"THE RATIO OF MORTALITY FROM PHTHISIS

is greatly in excess among the colored, owing to the fact that the predisposing conditions, such as unhealthful abodes, inadequate and unwholesome food, ignorance of and habitual neglect of sanitary laws, and dissipation are found to prevail amongst them. In 1875 the whole number of deaths, 788; of these there were 104 still-births; of these only 8 were white; for 81 days of 1874, whole number of deaths, 694; still-births, 80, all of these

colored except 8." Again: "Of 302 burials at public expense, 286 were colored; and nearly 70 per cent. of these burials were colored illegitimate children." (Dr. W. D. Stewart, Sanitary Inspector.)

The writer goes on to say: "To prevent this unnatural mortality, a thorough and persistent method of medical inspection is absolutely necessary. To accomplish this great mission and measure of good to humanity and society, the Board of Health of the District of Columbia *must be sustained by no less independent authoritative power than that of Congress.*" Italics his own.

GOVERNMENT AID NECESSARY.

Our purpose for introducing these facts is to show that diseases are fostered and propagated by the colored population, particularly small-pox and infectious diseases, and that the State should come to the relief of the people, by organizing a State Board of Health; by establishing sanitary rules and regulations to be followed in our corporate towns, and compel the people to ward off diseases, or prevent them by cleanliness and hygienic measures. The proofs are accessible to all, that the death-rate, the amount of sickness, and many contagious diseases, can be lessened, or kept away if proper effort is made. Nothing can be done without material aid from the State. There should be officers appointed and paid to make local inspections and general State inspections of the hygienic condition of the people. There should be a Board of Health in every county. The Government, both State and Federal, has been liberal in fostering centennial exhibitions, county fairs, agricultural bureaus, agricultural newspapers, stock farms, premiums for improved live stock, for improved poultry; premiums for inventions; reward for remedies for animal diseases; rewards for means of killing or keeping down destructive insects, grasshoppers, etc., and spending labor and

money freely for nearly everything else except the health, prosperity, increase and longegity of the human race!

We propose that the Texas State Medical Association, as a body,

PETITION THE STATE LEGISLATURE AND CONGRESS

for aid in carrying out plans for the improvement of the health of the people; for the establishment of a Bureau of Statistics; for the proper and systematic registration of births, marriages and deaths. Dr. Samuel Choppin, President of the Board of Health of the State of Louisiana, suggests, in order to secure such statistics, that all *marriage licenses be issued by the Board of Health,* and the births and deaths also reported there. These Boards should be empowered to promote the sanitary welfare by offering *free* vaccination to all; and the County Commissioners might be constituted the County Board of Health, and they elect some competent and suitable medical man for secretary, executive officer and registrar of vital statistics, assisted by deputies at suitable points in each county.

Having said this much in a general way in order to show the origin, progress and development of Hygiene and the necessity for proper organization and effective work, none of which will be deemed inappropriate we hope, we will lay before you an exhibit of the present

STATE OF THE HEALTH OF TEXAS.

The chairman of the Section had printed circulars distributed to nearly one hundred counties in the State, and to some of the military posts on the frontier, a copy of which is here given. While we return our sincere thanks to the gentlemen who have obliged us by their responses to these interrogatories, we feel discouraged by the silence of the large majority who have failed to answer. The indolence, the apathy, and neglectful-

ness of the members of the profession in this matter, and at former times, in not responding to interrogatories from different parties, members of different committees in this Association, who have written for help and for information on various subjects of importance to this body, as well as the profession at large, are certainly very discouraging. If we wish our profession success, and advancement in knowledge, we should extend all the help we can, or cease our complaint of slow progress, or lack of the *esprit de corps*. The laity watch us, and form their estimate of our abilities and status by our works, and our zeal in the cause of science. Hundreds of circulars have been issued asking for information or opinions, and out of all, only a few have the kindness, or thoughtfulness, or complaisance to answer. We also sought for information at Austin, by application to the "*Department of Insurance, Statistics and History*," hoping to obtain some knowledge of the births, marriages and deaths in Texas, but were informed, "There is no information on this subject in the office. This department was created with intent to collect statistics, but the law is fatally defective, and the Commissioner is powerless in this regard. Soon after his induction in office, he prepared a printed circular, which he sent to every Sheriff and County Clerk in the State; but, of these, only about twenty made returns, and these were evidently unreliable. Deaths are not required to be registered under existing laws. When the next Legislature meets, something should be done, and the Commissioner will take pleasure in calling their attention to the subject." (See Appendix C.)

MORTUARY AND SANITARY STATISTICS OF TEXAS.

The population of Texas, according to the U. S. Census of 1870, was: whites, 564,700; colored, 253,475; total, 818,575. The total deaths from June, 1869 to July, 1870, was 11,197, of which there were from general diseases, 3,848, including 680

from consumption; 464 from enteric fever; 596 from intermittent fever, and 327 from remittent fever; from diseases of the nervous system, 1.430; of the circulatory system, 204; of the respiratory system, 1,979, including 1,499 from pneumonia; of the digestive system, 1,498.

For the purpose of obtaining further information as to the sanitary condition of the State, and the experience and opinions of medical men, we prepared a circular embracing twenty-two questions, and distributed two hundred and twenty-five copies to those who are considered the ablest men and most interested in Public Hygiene, and to twenty-five County Medical Societies. There are many other questions which would have been embraced had there been any prospect of obtaining answers. We hope this beginning will awaken physicians and legislators to the importance of registration. (See Appendix B.)

QUESTIONS FOR OBTAINING DATA FOR THE SECTION ON STATE MEDICINE AND PUBLIC HYGIENE.

QUESTION 1. Is there a Board of Health in your town?

ANSWER. Yes, six; no, thirty-eight.

The response from one city was that they had had a Board only for the past twelve months; and another, that the Board was in operation only in summer. The Boards are usually composed of a majority of laymen; in Galveston, six to three.

Q. 2. How are your people supplied with water—by springs, wells, or cisterns?

Ans. All three, eleven; by springs, five; by cisterns, twenty-nine; by lakes and tanks, three; by river or creek, five.

Several remarked that their neighborhoods had improved in health as they became supplied with cistern water. It is well known that this is the best water in all regions. During the visitation of cholera in Louisiana and Mississippi, it was observed that the plantations which were thus supplied suffered

much less from that disease. The *tanks* are ponds made by dams in low places; persons outside of Texas might suppose they are wooden cisterns. All the wells and springs are charged with some alkali or mineral.

Q. 3. Are any diseases caused by the water?

Ans. No, forty-one; yes, seven, when lake, or pond and tank water was used, causing malarial fevers and diarrhœas; indefinite and uncertain, three.

Knowing, as we do, that all the water, except cistern water, is charged with some impurity, we are agreeably surprised to see the favorable reports.

Q. 4. What sources of malaria exist in your vicinity?

Ans. River, or creek swamps, twenty-two; marshes, thirteen; ponds and hog-wallows, eight; general malaria from vegetable decomposition, ten; alluvion, vegetable mold, five; bad water, one; none, eleven.

Many persons think if they live four miles or more from a river or swamp, they are not affected by its malaria; but wind, traveling from six to twenty miles an hour, can easily carry malarial poison that far.

Q. 5. What has been done for their removal?

Ans. Nothing, thirty-five; drains and ditches, twelve; extended tillage, five; opening fields, settling up, and filling up depressions, hog-wallows, etc., three.

Q. 6. What is done with garbage, excreta, etc.?

Ans. Nothing, thirty-four; hauled out of city and dumped in holes, washes and low places, nineteen.

The usual answer by many is, "The hogs are our scavengers." Even in towns of twenty thousand inhabitants this is the practice. Those situated on streams, have the filth thrown in them, regardless of the comfort and health of those who dwell below. There is no place where the filth is utilized for fertilizing purposes.

Q. 7. Name your most constant endemics.

Ans. The answers to this take a wide range, and we place them in catenation, according to numbers. Intermittent fever, thirty-six; remittent fever, twenty-nine; congestive, or pernicious fever, four; pneumonia, five; enteric fever, or typhoid, three; cholera infantum, two; catarrh and diarrhœa, two: bilious diseases, one; dysentery, diarrhœa, rheumatism and neuralgia, one; measles, one; pertussis, one; conjunctivitis, one syphilis, one; dysentery, one; while one says he has none!

A few classified their endemics as malarial fevers, which we placed along with intermittents and remittents. To persons in other States it may seem strange that conjunctivitis should be endemic; but in the western portions of the State, where this came from, this afflictive malady is fearfully prevalent; and also in many other portions of Texas it abounds; especially in the summer, in prairies, where there is lime in the soil, and there is plenty of dust. We are a little surprised that there is not more cholera infantum, more dysentery, or flux. The gentleman reporting syphilis as endemic, is a U. S. Army Surgeon in the West. We think this also should rank higher in the densely populated places, especially where colored people abound.

Q. 8. What epidemics in the last twelve months?

Ans. None, thirty-two; pertussis, six; rubeola, five; dysentery, four; pneumonia, three; typhoid fever, three; typho-malarial fever, two; rötheln, two; influenza, one; roseola, one; diphtheria, one; diarrhœa, one; parotiditis, one; remittent fever, one; variola and catarrhal croup, one; entero-colitis, one.

These returns also embrace several other diseases, but the very large majority stating they were free from any, shows that Texas has been quite healthy during the past year. Our personal experience is, that there is much less sickness now than there was between 1865 and 1875.

Q. 9. State approximately the fatality, pro rata with the number of cases.

Ans. Do not know, twenty-four. The other answers are

vague and indefinite, and some are in such shape as shows no familiarity with the rate of mortality as nearly established by statisticians. Thirteen say less than one in every hundred cases; seven say two in every hundred; one says one-fourth per cent., but whether he intends to say twenty-five in every hundred, or one-fourth of one per cent., which would be one out of every four hundred cases, cannot be decided. Two say five per cent.; one says one out of every sixty or eighty cases; another says one-twentieth of one per cent., or one to every two thousand cases; one, that he has not lost a case in two years!

Q. 10. State the pro rata of deaths in the white and colored races.

Ans. Do not know, twenty-three; more colored, eighteen; no difference, four; two colored to one white, three; three colored to one white, two. Some of the answers are vague, but, take them altogether, it is very evident the great majority believe or know that there are many more deaths amongst the colored than the whites, especially amongst colored children.

Q. 11. What diseases are most fatal amongst white people?

Ans. Pulmonary, twenty-six; congestions, ten; malarial, eight; enteric, seven; trismus nascentium, one; typhoid, one; typho-malarial, one; pernicious fever, one; syphilis, one; pistol shots and whisky, one; do not know, seven; one says there is no difference in the mortality of the races.

Embracing so great an extent of territory, with varieties of climate, soil and pursuits, there can be no uniformity in the diseases; but the large majority who see pulmonary diseases as the chief foe, shows that our State suffers very much from them. The pistol shots and whisky are reported by a U. S. army surgeon, on the western frontier.

Q. 12. What diseases are most fatal amongst colored people?

Ans. Pulmonary, twenty-five; do not know, eleven; enteric, seven; congestions, five; malarial, three; typhoid, one; infantile

diseases, two; strumous diseases, one; remittent fever, one; trismus nascentium, three; pistol shots and whisky, one.

We see again that pulmonary diseases destroy more colored people than any other one class of diseases. Several remark that the lack of comfortable houses, beds and clothing, lack of proper nursing and attention, cause this fatality.

Q. 13. Are colored people more subject than the whites to pulmonary diseases?

Ans. No, twenty-five; yes, twenty; no answer, five; do not know, two; indefinite, one; more subject to pneumonia, one; more to catarrh, one; more to bronchitic affections, one.

Several of the respondents live where there are very few negroes, and in some places there are none, and one said he does not practice for them, although there are many there. The question deserves and requires further investigation at subsequent sessions; and it is hoped Medical Associations in other Southern States will help to procure data and statistics on this question. Some say the colored race is not more subject to pulmonary diseases, but more of them die under such diseases than do the whites.

Q. 14. Are pulmonary diseases more fatal amongst colored than white people?

Ans. Yes, thirty-five; no, twelve; do not know, seven; indefinite, one; while one said, almost all blacks die when sick with this class of maladies.

The large majority who respond affirmatively, shows the opinion or experience of medical men in Texas on this subject. They are less careful of their health, and not as well housed and clothed as the whites, and when sick do not receive as careful nursing and attention.

Q. 15. What is the comparative total mortality between the two races?

Ans. Do not know, twenty-nine; more in the colored, sixteen; no difference, four; five say two colored to one white; while the

proportions are given of 3 to 2; 2 to 1 by two; 1½ to 1; 5 to 1; 3 to 1; ⅔ black to ⅓ whites; and one says twenty blacks to one white; no difference, four; one says, much greater in colored children.

It is seen by these returns that freedom has not proved to be promotive of longevity to the colored people. During slavery the difference was decidedly the other way, as all slaveholders can testify. There are many well-known causes for the increased mortality of these people, which it is needless to enumerate here. The statistics from Northern States and cities make the same unfavorable reports of these people. In Lampasas town, with twelve hundred whites, there were six deaths, and with seventy-four colored there were four deaths, in 1877.

Q. 16. What is the comparative fecundity of the two races?

Ans. Do not know, nineteen; more white births, fourteen; more colored births, ten; both equal, nine; as 3 whites to 2 blacks, by three; as 5 to 3, by one; colored more as 2 to 1, by one; as 3 to 1, by one; as 3 to 2, by one; while two report colored women as using abortives, which is very generally known as being one great cause of their diminished fecundity. During slavery it was rare to find a barren black woman; it was more common with mulattoes or quadroons. But the favors shown "breeding women," by their owners, was promotive of fecundity. Since emancipation, the colored have not increased near so much as during slavery. The slave trade was stopped in 1808, and the total number of slaves in the United States in 1810 was 1,185,000, and in 1870 they were 3,953,000, or nearly four millions, the entire increase being by propagation, and *none by immigration*, and this all under the curse of slavery. The census of 1880 will make some interesting revelations.

Q. 17. Do syphilis and gonorrhœa prevail more amongst the colored than the whites?

Ans. Yes, thirty-five; no nine; do not know, five; indefinite, two; one says they are equal in males, while another says, "All

negroes are syphilitic;" another says, three colored to one white; one says negroes suffer less from these diseases than the whites.

Q. 18. Are these diseases more prevalent in the colored than before emancipation?

Ans. Yes, thirty-eight; do not know, eleven; no, three.

One says there are seventy-five cases now to one during slavery. Another says there are ten-fold more cases. These answers are sufficient without comment or enlargement, more than what has been said in the text of this report. This widespread disease has also lessened the procreative powers. It is a very general opinion that syphilis will ultimately spread, as it has in Guatemala and Honduras, and destroy the colored race in this country. Even if the Government were to pass a "contagious diseases act," as has been done in England, it would scarcely have any controlling power, owing to the moral obliquity of the race.

Q. 19. Has there been any change as to diseases and types of diseases in your section in the past ten years?

Ans. No, twenty-three; yes, fifteen; do not know, eight; indefinite, three; three say more typhoid type in diseases; two say more hæmaturia miasmatica; two say diseases less malignant; while one each says, less malarial fever and yellow fever, and diseases of less asthenic tendency; more hepatic and nervous diseases; less typhoid fever; more asthma; more malarial diseases.

These reports seem contradictory, yet when the extent of territory is considered it obviates the discrepancy. In many of the northern counties, immigrants coming in great numbers from the Northwestern States, bring diseases with them, and the aggregation of population in newly-settled towns would cause typhoid cases where they had not been known. On the other hand, increased tillage and drainage in districts where

malarial diseases had prevailed would have a tendency to lessen them.

Q. 20. Is there more sickness now, or less, than there was ten years ago?

Ans. Less, thirty; more, ten; no difference, seven; do not know, five.

This is a very favorable and gratifying exhibit for the State, and many of the respondents are very emphatic in attesting the improved sanitary condition of the country, and the diminished bills of mortality.

Q. 21. If less, what caused it?

Ans. Sanitary measures, fifteen; drainage, fourteen; increased tillage, seven; do not know, twelve; less malaria, seven; four say better houses, better water and observance of hygienic rules; one says less rain; another, more rain; one says less sickness amongst the whites only; one that it is the result of the settled political status; one, acclimation; one, atmospheric conditions; one, the blessing of forests; one, better diet, and variety in diet.

So each one has his notion about the cause; but it is evident there is much less sickness than there was, even five years ago, which is in a large measure owing to improved dwellings, better and more attention to hygiene.

Q. 22. If more, what caused it?

Ans. Do not know, eight; influx of and aggregation of population, five; from increased area of cultivated land, less pasturage, and thereby more decaying vegetation, three; more in colored people from carelessness, improvidence, bad dwellings and more filth, two; more in the laboring classes, owing to harder labor and less comfort, two; more from lack of drainage, one; from vicious conditions of civilized society in a crude state, as prevails on the Western border, one.

We distributed this circular to physicians and Medical Societies in eighty-six counties—in a few instances as many as four in a county. We received responses from fifty-four physicians in thirty-five counties, in all parts of the State. We received a response from the President of the Fayette County Medical Society, and the *only one* out of the twenty-five Societies in Texas. This is certainly a meagre showing from the great State of Texas, with an area of 275,000 square miles, and over 1,500,000 inhabitants, and two thousand five hundred physicians, only fifty-four able to answer the quiz.

We take the liberty of introducing a brief extract from Gov. R. B. Hubbard's oration, delivered at Philadelphia at the Centennial Exposition, on

"TEXAS HEALTH AND ITS EVIDENCES."

"There are not less than twenty thousand people who actually live and camp nightly on the prairies of Texas. When the number of stock-men engaged with their herds, the wagon trains always passing to market or military posts, troops on the march, immigrants moving, surveyors and their parties, and excursions from all lands, always on the wing, the estimate might be doubled without fear of exaggeration. In this out-door life, from the ocean to Kansas, and from the Sabine to the Rio Grande, I am not advised of a single case of consumption ever originating in Texas. I refer you to the Medical Association of the State, and to the concurrent testimony, gratefully rendered, of nearly two millions of people. While we are not exempt from the 'ills to which flesh is heir,' we have thankful pride that plague and pestilence have never yet desolated our homes. Health is almost universal throughout the State. We do not claim that the fabled 'fountain of youth' pours its life-renewing waters evermore amid our hills and valleys; but we do claim that on our soil, and in our climate, a hardy and healthful popu-

lation abounds, and that our mortality is less than sixteen to the thousand annually. These are the facts, and will not and cannot be gainsaid by carping critics and willful maligners of our good name." (See Appendix A.)

Thus having, to some extent, performed the duty assigned this Section, we would formulate our principal recommendations in the following summary, and respectfully solicit the concurrent action of each member of this body in laying the subject before our next Legislature, and urging its speedy enforcement by statutory enactments, for the benefit of the health of the people of our State.

I. We respectfully recommend the immediate organization of a State Board of Health, and compensation for services.

II. That there be established in every organized county a County Board of Health, with provision for compensation for services.

III. That there be established a system of Registration of Births, Marriages and Deaths.

IV. That the County Boards of Health *alone* have authority to issue marriage licenses.

V. That the magistrates in each county precinct be required to register the births and deaths in their wards, and report the same monthly, or quarterly, to the County Board of Health, and that an appropriation be made for their compensation, *per capita*, for the same.

VI. That appropriations be made by the State to pay for vaccination; that vaccination be compulsory by law, and revaccination every —— years; and where a person neglects, or refuses to be vaccinated, and have his children vaccinated, it shall be a felony, and punished by fine or imprisonment.

VII. That qualified persons be appointed by the Governor to make topographical surveys of the State; to investigate local or

general causes of sickness, and what remedial measures are necessary to be used for their melioration or removal; to report the medicinal waters and vegetable medicinal resources of the State; and that this be done by persons residing in each Judicial or Congressional District, and they be compensated for their work.

VIII. That we petition Congress for the removal and colonization of the colored people.

The following list embraces the principal authorities and documents which were consulted in preparing this report, and we return our sincere thanks to gentlemen who furnished the most of them at our request:

Appleton's American Cyclopædia; Dr. E. A. Parkes' Manual of Practical Hygiene; Chambers' Information for the People; Transactions of the Medical Associations of South Carolina for 1877; of Virginia for 1876; of Georgia for 1875–6–7; of Tennessee for 1876; of California for 1876–77; of Arkansas for 1875–76; of Connecticut for 1876–77.

Reports of the Boards of Health of District of Columbia for 1872, 1875, 1876; of Board of Health and Vital Statistics of Virginia for 1873; of Mobile for 1875, '76; of New Orleans for 1873 to 1877; of St. Louis for 1876; of Boston for 1875.

Reports of State Boards of Health for Wisconsin, 1876; of Michigan 1873 to 1876; of Massachusetts for 1870 to 1876; Report of Registration of Births, Marriages and Deaths in Connecticut Fourteen Years, from 1862 to 1876; for Providence, R. I., for 1874, '75; Report of Board of Public Charities of the State of New York 1873; Public Charities, Prisons, etc., of Maryland for 1877; Conference of the Boards of Public Health at New York, 1874; Address on Hygiene and Preventive Medicine, at Philadelphia, in 1876, by Dr. H. I. Bowditch; Analysis of the Record of Yellow Fever in New Orleans in 1876, by Dr. Joseph

Holt; Codified Ordinances of New Orleans Board of Health, 1873; Disinfection in Yellow Fever in New Orleans, 1876, by Dr. C. B. White; Acts Establishing and Regulating Quarantine in New Orleans, 1876; Compendium of the Ninth Census of the United States; Mortuary Tables of the United States for 1870.

The following are the only notes of value, pertaining to the questions, which were received over and above the direct answers tabulated elsewhere:

Columbia, Brazoria Co.—Q. 4. A rich alluvial soil, with decaying vegetable matter. 15. The mortality is greater amongst the colored, which I think is owing to want of proper attention. 16. Many more children are begotten and born in colored race, but fewer raised than in the white race, owing to neglect. 17. Syphilis and gonorrhœa almost belong to the colored. 17. They all having no protectors to look after them, they are more diseased than formerly. 19. Hæmaturia miasmatica is much more frequent now than formerly.

Fort Stockton, Pecos Co.—United States troops, colored, four companies; citizen population, white American, colored and Mexican, about twelve hundred; mostly engaged in agriculture. Q. 5. All land under cultivation is flooded several times in the year by irrigating ditches. 6. Excreta are thrown on the ground to dry up and blow away. 10. With the white race are included Mexicans; *pro rata* of deaths, two whites to three colored. 11. White Americans, the mortality is so small that I am hardly able to state. Two deaths, from advanced consumption, in white immigrants, have occurred. No cases have arisen in this locality. Mexicans suffer from scorbutus, scrofula and syphilis. 16. Married white Americans and Mexicans have large families, usually. Colored people are reckless abortionists; they avoid children when possible. This climate is well adapted to the relief of pulmonary disease; the altitude is not too great—3,400 feet. Aside from mild malarial fevers there are few causes for disease.

Galveston.—Q. 4. Unfilled ponds and low grounds, chiefly in the northwestern and southwestern suburbs of our city. Probably some malaria is also brought by the northerly winds during the summer and fall months, from the marshy lands of the main-land, across the narrow portion of the Bay. 5. Extensive filling of the several bayous and ponds with beach sand, and the general system of filling in the streets, yards, under the houses, etc., that has been systematically carried on for the past six or eight years, has done much to lessen malaria, and morbific influences generally. Another correspondent there says: Q. 10. There is not much difference, except among the children. Trismus nascentium, diarrhœa and still-born cases are very common with the colored, more than with the whites. 15. The mortality much greater with the blacks, especially with the children. So far as adults are concerned there is not much differenee.

Grand Bluff, Panola Co.—This is a crossing on Sabine River. Our most fatal diseases are malarial in origin, i. e. congestive, particularly malarial hæmaturia, which we have a great deal of in autumn. Negro population particularly exempt from it; never saw a case among them. Our population is rapidly increasing by immigration; more lands are being opened for cultivation; timber decaying, etc.; hence we have more sickness. There are so few negroes in this portion of the country, particularly within my practice, that I am unable to answer questions 12, 13, 14 and 15.

Hardin, Hardin Co.—Hardin County is situated in the great pine belt of Texas. The land is dry, and heavily covered with yellow pine timber. The rivers, creeks and branches are of pure and fresh water, supported by a spring, impregnated with nothing, except the great Sour Lake which is situated in the heart of the County; and as a *watering place, variety of waters, medical virtues,* I do not believe has a *rival* under the

sun. Therefore to speak the truth, we are almost exempt from sickness of any kind—scarcely ever hear of a case of fever of an endemic character.

Pennington, Trinity Co.—Q. 10. The death-rate among the negroes is evidently greater than that among the white race, but I suppose it is due, in a great measure, to the want of proper medical attention, and to the untimely administration of medicines by their nurses. The death-rate in childbed, how ever, does not appear to be so great as among the white race, although they are almost invariably attended by negro midwives.

Rockdale, Milam Co.—Q. 15. I lost a case of puerperal mania nearly two years ago, and one lately, of hyperæsthesia. In the surrounding country, the prevailing diseases are malarial, but there has been no epidemic within the last year. 16. I believe that the comparative barrenness of the blacks is caused by the more prevalent use of means to prevent conception and produce abortion.

Rockport, Aransas Co.—We have no Board of Health, except that appointed when we had yellow fever. Three miles north of us is the beef packery, in the town of Fulton, where any amount of animal matter lies for months, both summer and winter, in a putrid state, emitting a terrible stench; and yet, after doing the chief part of the practice there for years, I have never seen a case, the cause of which could be traced to this state of the atmosphere. Our town and surrounding country is chiefly of a low, flat, sandy soil, very near the level of the sea—all salt marshes. Intermittent and remittent fevers of a mild type prevail here at times, and are easily controlled. I have never seen typhoid fever in this, Live-Oak, Point; nor is there a tendency of other diseases to run into typhoid. Chronic enlargement of the spleen, so common in malarial districts, never originates here, and cases of it coming here improve rap-

idly. From my description of our locality, you will see at once that dysentery would be likely to be our one chief foe, while congestion of the liver is quite common, and abscess of that organ is not at all rare. While enteritis, especially among children, is very prevalent, pneumonia is rare. This winter we have had six or eight cases of pleuro-pneumonia, all of which recovered. During the damp, chilly winds of early spring, bronchitis prevails.

Rockwall.—I began the practice of medicine here in the spring of 1861. I found the black, waxy, prairie land covered with long grass, and the "hog-wallows," during winter and spring, filled with rain water. This was the case until four or five years since, and until the country was put in cultivation and the grass destroyed to a great extent. For several years after I came here we had a good deal of pneumonia every winter and spring; but for several years past we have not averaged half a dozen cases a year in the whole county. I believe the percentage of typhoid and dysenteric cases has increased a little; all others have diminished. We have very few negroes, and they mostly of the better class.

San Antonio.—This city has a population of whites 13,000, Mexicans 5,000, colored 2,000, total 20,000. The city has a great abundance of water, in the form of ditches, which run through the city, and are cleaned once a year. The filth taken from them and from the streets is carried to the outskirts of the town. San Antonio will have, by next July, water works, which will improve the health of the city. We had 385 deaths during the year 1877. We cannot complain as much of the filth as of the dry lime dust in the streets in good weather. The water works will relieve us of all this soon. Another respondent there says: Q. 15. The power of resistance to disease is less among the colored than in the white race here, as is the case elsewhere; consequently the death-rate is higher among the former.

Sherman, Grayson Co.—There has been a very notable increase of the typhoid element complicating our remittent fevers of this locality, constituting the so-called typho-malarial fever. As countries grow older, and as population becomes more dense, the rule is, that malarial fevers, if endemic in the locality, give way to some extent, or become blended with typhoid. It is fair to assume, we believe, that this is one of the factors concerned in the causation here; but we believe it insufficient to account for the rapid development of typhoid observed within the last two or three years. We are strongly inclined to the opinion that the large immigration into this part of Texas from the Northern States, where typhoid is endemic, has had a large share in disseminating the disease among us. Some of these immigrants, contracting the disease at home, reach here during the time of incubation, and falling sick among us, propagate the disease by contagion, as well as through the medium of excreta. May not the cause of typhoid be conveyed to us through fomites from the same source? Another respondent there says: Q. 11. Cholera infantum in children during the summer months Inflammatory diseases in adults during winter and spring. 18. Before the abolishment of slavery they were protected by their owners, and the best medical attention obtained when they were sick from any cause.

Victoria.—Q. 21. I would observe that there has been a great improvement in the general health of our county since the yellow fever of 1867.

Waco.—I will be pleased to get the rain-fall in your county for the year, as I believe our unprecedented good health for the year throughout the State is due to the abundance of rain, and that the health of any place or point will be measured by the rain-fall. Another says: Small-pox excitement has kept me busy vaccinating. Many cases have been reported, but we have had only two, the Northern drummer and one negro. The

scare has done this much good—to cause many to apply for vaccination. We have had no epidemic here for a long time. A few cases of measles, hooping cough and scarlet fever; the last was confined to East Waco. Chills and fever occur much less frequently than formerly. Very few cases of pneumonia this winter. 21. Change in diet from bread and meat to fruit and vegetables had a beneficial effect on health.

Wallace Prairie, Grimes Co.—In answer to Q. 4, 20 and 22, I will give you a brief history of this prairie since 1868, as I have resided here nearly all of the time since that period. Previous to 1868 only a small portion of the land was cultivated; the country was almost entirely a range for stock. In 1869 there was quite an influx of white farmers from other States, and since then the population has increased greatly. Thousands of acres were put in cultivation, and in 1872 the entire prairie, embracing nearly 20,000 acres, was all put under one fence, without cross fences, and all stock kept excluded; so from a pastoral region all was changed to agricultural. Thousands of acres were plowed, and all the parts adjacent to streams were covered with luxuriant, succulent vegetation, so dense that the sun's rays could not penetrate. In the latter part of summer and the fall, this mass of decaying vegetable matter, which had formerly been consumed by the stock, was a fruitful source of malarial disease of a congestive character. Our population has been greatly increased, and the amount of sickness also, but in greater proportion than formerly. My opinion is, thas if the farms were each fenced separately, so as to allow stock to keep down luxuriant vegetation, and allow freer circulation of air, there would be a commensurate improvement in the health.

ESSAYS.

AMPUTATION OF ARM AT SHOULDER AND OF BOTH LEGS. RECOVERY.

BY J. T. FIELD, M. D., OF FORT WORTH.

During the morning of the 1st of January, 1878, I was summoned to see a man whom one of the engines of the Texas & Pacific Railroad had just run over. The messenger stated that an officer of the Railroad Company had sent him, and for me to be as quick as possible, as he feared the man was killed; he was still lying on the track, and there were blood and bones scattered along where he had been dragged by the engine. I requested my partner, Dr. W. P. Burts, and Dr. S. W. Field, of Dallas, Texas, to go with me.

We found our patient lying on the floor of the freight depot. No one seemed to give him much attention, but, on inquiry, learned that Dr. Ashworth had just seen him and had administered a dose of morphine, and had gone over to his hotel to prepare a room for him. The Doctor returned in a few moments, and we placed our patient on a litter, and soon had him in a comfortable room, through the generosity of Dr. A. and Mrs. Clark, of the Clark House. Now the question was, What should we do—let the man die in peace, which he seemed undoubtedly to be doing, or operate? It seemed wicked to interfere, although I suggested the latter, which was agreed to by

the medical gentlemen present, viz., Doctors C. P. Ashworth, W. P. Burts, S. W. Fields, M. S. Matheney, and some others, whom I regret I cannot now remember.

Dr. Burts administered the anæsthetic (chloroform), and I performed the operations, kindly assisted by the Doctors above mentioned. Dr. Burts announced the patient ready, when we stripped him and examined the remainder of the wreck, and saw that he required an amputation at the shoulder, and both legs, just below the knee.

I paid my respects first to the right arm, and found it crushed and mangled from the elbow to the shoulder. The wheel of the engine had cut the skin and greater portion of the muscles of anterior part of shoulder from anterior three-fourths of clavicle, extending downward to lower and posterior part of axillary space. The integuments and muscles of anterior part of arm were almost wholly destroyed. A portion of posterior surface was cut in several places, and remainder badly contused. The humerus was fractured in several places, crushed off at insertion of capsular ligament. Joint uninjured.

I threw a ligature around the axillary vessels, which were lying at the bottom en masse; trimmed all the jagged and contused flesh off of anterior part of wound, and made a flap from posterior surface of shoulder and arm, which was, I regret, greatly contused.

The question now presented itself, Should I disarticulate the small remaining portion of humerus, or smoothe the roughened end and let it remain? My idea was that exposing the joint would add to the dangers of the case, which suggestion was fully endorsed by the gentlemen present. I therefore left it.

Whilst sponging and examining the wound, a terrific spout of blood struck me full in the face. I thrust my hand into the bottom of the wound and seized the bleeding vessel. Dr. S. W. Field, after three attempts, threw a ligature, by means of an aneurism needle, as we thought, around the vessel; but when I

let go, to our amazement, the vessel spouted as at first. During this time the patient lost a good deal of blood, and I heard Dr. Burts say, "He's gone." Indeed, his respiration had ceased, but by artificial respiration he was soon restored. I now requested Dr. Field to put a tenaculum between my teeth, my hands being occupied in holding the vessel. I let go, and fortunately succeeded in gigging the vessel with the tenaculum at the first spurt of blood, and Dr. F. secured it by a ligature at the lower border of the first rib.

I next examined the legs, and found them both in about the same condition, viz., foot and ankle mashed and literally torn to pieces, tibia and fibula fractured in several places; soft parts badly contused.

The patient was now so weak from the loss of blood that I used the Esmarch bandage, and, as speedily as possible, amputated the right leg at the upper fourth, by the flap operation secured the vessels, and applied the bandage to the left leg, which was amputated in the same manner as the right, leaving in both all the stump possible above the injuries.

Although the latter amputation was somewhat higher than the right, he did not lose two ounces of blood, as I was very careful to secure and ligate the mouths of every vessel, veins as well as artery.

The wounds were all left open for four hours, then brought together by sutures and adhesive straps, the flaps all fitting nicely. After applying carbolizedoil and bandages, morphia and whiskey was ordered. The patient was under the anesthetic two hours, a great part of the time being consumed in securing the brachial artery.

Next morning our patient was doing exceedingly well, pulse and temperature about normal; had a very quiet night, requiring but a small amount of the morphia. In addition to the morphia and whiskey, we now ordered Tinc. Fer. chl. and Quinia Sulph. and food in as concentrated a form as possible.

To avoid extending this report, I will only give a synopsis of the after treatment which was principally carried out by Dr. Ashworth; Dr. Burts and myself visiting him as occasion required.

On the fourth day our patient had some fever and considerable arterial excitement, with a slight amount of delirium. A few doses of Liq. Am. Act. and Tinc. Aconite soon relieved him. On the fifth day we removed the dressings, and found the wounds doing nicely; except the flap of the shoulder which showed indications of sloughing, which it did in a day or so in spite of carbolic acid, sol. hyd. of chloral, cleanliness, etc. We now had a large open offensive wound, sloughing in a number of places with the end of the humerus occupying its centre, looking rather comical, and as if it should have been removed. The anterior flap of the right leg also sloughed, leaving the ends of the bones bare; this about the sixth day (no notes of case were kept, and I cannot be exact). In two or three days, the left anterior flap sloughed, and we had three large suppurating wounds to contend with. By the use of thirty drops of sul. ether, applied once a day after thoroughly washing and bathing in a solution of chloral hydrate, the sloughing all soon ceased, and healthy granulations sprouted in abundance. About the fourteenth or fifteenth day, he was attacked by a severe diarrhœa; the discharges were profuse, frequent, and terribly offensive. We tried to control his bowels by administering opium and various astringents without much success for four or five days, when the diarrhœa gave place to an attack of dysentery with frequent small bloody and mucus stools, accompanied by a great amount of tormina and tenesmus. The iron in the above mentioned prescription was omitted when the diarrhœa first made its appearance. We now (twentieth day) directed a saline cathartic with ferri sulphatis which in a few hours produced several large watery discharges, with a complete relief of the dysentery; when we ordered pulv. opii gr. ¼

oxide of zinc gr. v pro. re. nata. which controlled his bowels and relieved all pain.

From this time he has not had an untoward symptom.

On the fifty-fourth day, when he was removed to his home in Johnson County, the stump of his left leg had completely cicatriced. The right leg was almost healed. There was a small granulated surface at the shoulder doing remarkably well; bone completely covered.

Heard from him a few days ago; wounds all healed. He was getting fat and crawling around first rate.

LACERATED AND CONTUSED WOUND OF THE LEG, SECONDARY AMPUTATION, TRAUMATIC ERYSIPELAS, SECONDARY HEMORRHAGE, TETANUS. RECOVERY.

REPORTED BY JNO. H. POPE, M. D., MARSHALL, TEX.

A railroad conductor, twenty-six years old, of fine physique, of nervo-sanguine temperament, very excitable, temperate in the use of alcoholic stimulants, an habitual smoker, subject of constitutional syphilis, no hereditary taint, was caught under the wheel of a flat car at 1 A. M., August 12th, 1877. The soft parts of the left leg were badly lacerated and contused. The patient was brought to Marshall (about sixty miles), and was seen by Dr. Eads and myself some six or seven hours after the injury. He had drank freely of whisky in the meantime, and reaction was well established.

The wound extended from the inner edge of the left patella obliquely downward to below the outer malleolus. The anterior surface of the tibia was laid bare for several inches, but neither of the bones was broken. The extent of contusion of the deeper soft parts could not be definitely judged of, on account of the swelling rendering the parts tense. Sensation and circulation both good in the foot. There had been considerable venous hemorrhage from the superficial veins. We decided to attempt to save the limb. All clots of blood were scooped out of the wound, and the edges drawn together and held by interrupted sutures, supported by adhesive straps and roller bandage. Cold water was applied by the

drip until danger from the height of the active inflammation was over. The wound soon united for one or two inches at either extremity. The swelling in the calf of the leg did not reduce, but rather increased. The sutures were taken out and the limb dressed more loosely. Warm applications were substituted for cold, and the patient given twenty drops of tinct. of iron and two grains of quinine every two hours. The temperature up to this time had not been over 101.5°. On the afternoon of the fourth day there was a severe rigor, followed by temperature of 104°. Made an extensive cut in dependent part of the leg, to allow the escape of any purulent matters; left off all the bandages; put the leg in a fracture box and applied wheat bran. Gave five grains of quinine every hour till the temperature was reduced to 99°.

The iron and liberal use of food and stimulants were continued. On the fifth day there was delirium. Large quantities of offensive, dark, purulent discharge came from the extensive cut in the back of the leg. The box was discarded, and yeast poultices used in day time and charcoal poultices at night—thoroughly cleansing the leg with disinfectants each time the poultices were changed. Sensation and circulation in the foot soon left, and the dark discoloration of the skin of leg made it manifest that gangrene had taken place. On the morning of the sixth day after injury, a line of demarcation appeared about three inches above the knee-joint in front and about four inches behind.

Chloroform was given; Esmarch's bandage applied from the knee upward, and amputation performed through the lower third of thigh. Made an anterior quadrangular flap about 4 in. long, and a posterior, rounded, somewhat shorter one. Carbolized ligatures and sutures were used; ammonia and brandy were given, and patient re-acted well and promptly. Ligatures came from the small arteries on the second day, and from the Femoral on the third. The wound looked dry, unhealthy,

disposed to gape or pout, and the skin at the inner corner of the anterior flap had a reddish, erysipelatous flush. The sutures were removed, adhesive straps substituted, the stump dressed with carbolized oil, and cotton batting confined by cap and loose roller.

I may state that the patient was, all this time on anti-syphilitic treatment, (iodide of potassium and mercury) and iron and quinine. On the fourth day after amputation, the stump began to suppurate, the threatening erysipelas subsided and the wound progressed favorably until the tenth day, when I was sent for to check hemorrhage. The bleeding had stopped before I arrived, but the patient's strength had been perceptibly affected by it; the quantity of blood lost being sufficient to saturate the dressing, and make quite a pool in the bed under the patient.

The elastic tourniquet was placed around the upper part of thigh and given in charge of an intelligent assistant. The dressings were removed, but there was not even oozing of blood from any part of the wound. There was a coagulum protruding from a gap between the flaps at the upper inner extremity and another about the centre. After watching these points nearly an hour, and finding no return of hemorrhage, it was thought best to trust to careful management and coagula to prevent return of hemorrhage, rather than tear the wound open to look for an artery, the position of which was, up to this time, unknown. Compressors secured by straps were applied to the points indicated by the coagula, and the stump again dressed. Cautioning the patient against the least exertion, he was lifted from the pool of blood and placed on the other side of the bed. While watching for sign of return of the hemorrhage, I saw the dressing suddenly saturated with blood.

The nurse tightened the tourniquet, and the dressings were removed. The hemorrhage had ceased about as soon as it had begun. But the patient was almost pulseless. Brandy and ammonia were freely given; the head was lowered, and the hips

and lower extremities raised. Esmarch's bandage was applied, and then the elastic tourniquet reäpplied. No chloroform could be given, both on account of the condition of the patient and the value of the time. The application of the Esmarch's bandage caused the united edges of the wound to tear open at the central part of the stump. The femoral artery was found completely closed, but on loosening the tourniquet a jet of blood spouted from the upper inner edge of the wound. The tourniquet again tightened, the fresh coagulum was scooped out with my finger, the *anastomatica magna* branch of the femoral was caught in the forceps and a ligature thrown around it. The thread cut through the softened coats. By using my finger, I found the tissues adjacent, especially the cut end of the sartorius muscle, where it crosses obliquely in front of the artery, were sloughing, probably having been involved before the amputation, and overlooked at the time the operation was performed. By using the forefinger and forceps handle the dead tissue was scraped out and a ligature applied to the sound part of the artery. The tourniquet was then loosened, and being satisfied there were no more bleeding arteries, the edges of the wound were drawn together and secured by broad adhesive strips, and dressed as before the hemorrhage. Beef tea, brandy, iron and quinine rapidly recruited the patient, so that in four days he had about recovered from the effects of the hemorrhage.

On the fifth day after the secondary hemorrhage and the fifteenth after the amputation, there was some painful twitching of the stump. Used tight bandaging and hypodermic injections of morphine. A cold, northeast wind and rain prevailed during this week.

Three days after the first twitching in the limb, there was noticed some stiffness in the jaws, so that the patient could not put his tongue out without wedging it between his teeth. Dressed the wound with sweet oil and morphine, cotton batting

and loose bandage. Prescribed chloral hydrat. dr. ij; potass. bromid. dr. ij; aquæ camphoræ fl. oz. iv; misce. s. tablespoonful every half hour till asleep. Returned in a few hours and found the patient asleep, but the limb still jerking every twenty minutes. Continue treatment. Next morning the stump (which had continued to look healthy during the tetanoid attack), was dressed as on yesterday. Suspended the use of chloral and bromide of potassium, and substituted pills of extract of cannabis indica, two grains every two hours. This remedy had decided effect in controlling the contractions in the stump, kept the patient in a quiet sleep from which he could be easily roused, and did not interfere with his appetite, for the patient ate ravenously. The kidneys secreted copiously, but the catheter had to be used two or three times a day. The bowels were constipated, requiring large doses of cathartics to relieve. The one generally used was castor oil, in 1½ oz. doses; occasionally we used five grains of calomel and five of soda.

The most marked improvement in the symptoms was on the eighth day, the morning after the bowels had acted freely from one of the doses of calomel and soda. I merely state the fact, without claiming the *propter hoc.* The stiffness in the jaws gradually disappeared after the eighth day. The painful contractions in the limbs had been completely controlled by the continued use of the cannabis indica. Two or three times spasms of all the muscles seemed to threaten, and once (seventh day), there was temporary opisthotonos.

The delirium from cannabis indica was generally mild; sometimes, however, the hallucinations were such as to require treatment. The bromide of potassium answered the purpose. As soon as the threatening symptoms had subsided (eighth day), the cannabis indica was discontinued, and hypodermic injections of $\frac{1}{4}$ gr. of morphine and $\frac{1}{80}$ gr. of sulph. of atropia were given at bed time. On the tenth day all tetanoid symptoms had disappeared. The patient's strength and general appear-

ance improved rapidly, but the stump healed very slowly. He was able to ride out about two weeks after tetanoid symptoms had disappeared, but the wound had not entirely healed when he left for his home in a distant State, more than a month after that time. The point last to heal was near the inner angle of the anterior flap, where the wound showed an obstinate disposition to either ulcerate or throw out exuberant granulations. The constitutional syphilis is believed to have been the cause of this, and the predisposing cause of the complications that arose during the progress of the case. Under this belief, the patient was advised to continue the anti-syphilitic treatment after he passed from under our observation.

LIGATION OF SUBCLAVIAN ARTERY, WITH SOME REMARKS.

BY THOS. D. WOOTEN, M. D.

Harvy Brundage, age twenty-three years, good family history, was stabbed in a personal difficulty, in Williamson County, Texas, May 12th, 1875. The knife entered about the inferior part of anterior fold of the axilla, and passed upward and backward, injuring the inferior or terminal part of the axillary artery. Considerable loss of blood occurred at the time, which subsided, however, and the patient was up and walking about in eight or ten days, but with an occasional bleeding, and a large, diffused, aneurismal clot formed in the axillary region. This is the account given by Drs. Denson, Sharp and Tully, who were and had been in attendance upon the case.

I was called to see the case May 28th, and found almost complete loss of pulse at wrist, and a large, diffused, aneurismal clot as above described, patient anæmic from loss of blood, arm cold and somewhat swollen. I was satisfied that the axillary artery was wounded, and that ligature was necessary. The condition of the parts in the axillary region was such that ligation at the seat of the injury was not feasible, and we decided that tying the subclavian in its third division was the most favorable and practicable operation. Assisted by the above-named gentlemen and two other neighboring physicians, we proceeded to operate. Chloroform was administered; the patient was laid upon a table on the sound side; the arm was pulled down as far as the tumor would allow, so as to draw the clavicle as much as possible out of the way of the

artery; the skin was well drawn down upon the chest, and an incision was made down to the bone along the prominent part of the clavicle, from the edge of the sterno-mastoid to the trapezius. The cervical fascia being divided, the knife was laid aside and the parts separated by the handle of the scalpel down into subclavian triangle, and the artery found and tied just outside of tubercle on first rib. The incision was closed by interrupted sutures and adhesive plaster. The clot in axilla was incised and turned out, which was probably a pound and a half in weight. The disposition to bleed was not decided, and the circulation so feeble in the arm the artery was not tied below the injury.

The patient rallied from the chloroform well, and was doing well two hours after the operation, at which time I left the patient in care of the Doctors with the understanding, if gangrene of the arm ensued, which I believed would occur, to disarticulate at the shoulder without delay. Gangrene did supervene in twenty-four hours. Dr. Tully, assisted by the other gentlemen, amputated at the shoulder on the 30th. The patient stood the operation well, and continued to do well until the seventeenth day after ligation, when blood was discovered in the wound at the clavicle, which had healed by first intention, except at the point of exit of the ligature. In a few hours after the appearance of the blood a fearful hemorrhage ensued, which the nurse controlled, however, by digital compression. Two days after a second hemorrhage occurred, which Dr. Tully, being present, controlled in like manner. The ligature was found loose and was removed, being the nineteenth day. The compression was kept up eight hours. Three days after there was a return of hemorrhage and was again controlled by pressure. The patient finally made a complete recovery, and his health now is most excellent.

I am indebted to Drs. Tully and Sharp for the particulars of this case, and the recovery was doubtless due in a great degree

to their kind and skillful attention. The hemorrhage doubtless was from the distal end of the artery, or it would not have been controlled.

CASE SECOND.

Major T. P., of Austin, Texas, age fifty-six, a lean, delicate man, but of good family history, was wounded in a personal encounter on the evening of the 8th day of August, 1877, by two small pistol balls. One ball struck the fourth rib, under the arm-pit, on the left side, and passed posteriorly and superficially around, and was cut out three inches from and on right side of the spine. The second ball entered the inferior part of anterior fold of axilla, on left side; passed backward and inward under the head of the humerus, and out at the lower third of the scapula. Considerable hemorrhage at once ensued, but was soon stayed by pressure. He was conveyed to his residence, four or five blocks away. I saw the case about an hour after the injury, with several other physicians. Bleeding had entirely ceased; there was some depression from the shock and loss of blood; no pulse perceptible in the left arm; some extravasation and blood clot had formed in the axillary region; paralysis of both motion and sensation was more or less complete in the entire arm.

After due consultation, it was agreed (as it was then night and nothing urging surgical interference) to wait until morning to determine what surgical procedure would be necessary in the case, expecting, however, it would be necessary to cut down and tie the artery above and below the point of injury. I saw the patient about eight hours after the injury. The pulse had become perceptible at the wrist, and the patient resting well. Next morning at nine o'clock, in consultation, we decided, as there had been no return of hemorrhage, and the circulation was partially restored in the arm, and in the absence of positive

evidence of injury to the main artery, to leave the case alone for the present. The case progressed favorably; the wounds healed up almost entirely by first intention. The arm remained paralyzed, however, both as to motion and sensation, from the elbow down, and was attended by a numb, dull pain. The circulation improved in the arm and was almost normal. Notwithstanding his favorable condition, he was kept in bed twenty-eight days, after which time he was permitted to get up and exercise about the house. The very next day I perceived the pulse was lessened in force and volume at the wrist. In a few days a pulsating tumor, the size of an almond, was discovered at the point of injury, which slowly increased to the size of a walnut. He was put back in bed.

It being a case of circumscribed traumatic aneurism, I determined to try to consolidate the tumor by pressure, believing at the same time a point would be gained in the case by delay if ligation should become necessary, by establishing the collateral circulation. I applied a rubber bag, filled with ice water, in the axilla, over the tumor, with an elastic band over the point of the shoulder. In eight or ten days, although the tumor increased in size, it became consolidated, and I could not detect the pulsation nor the bruit that had been so marked; could detect only the pulsatile sound of a tied artery. But, although in this condition, it enlarged in an upward direction. The axillary artery was occluded at the point of injury, but a leak was evidently going on slowly, and a tumor growing by a sort of accretion. The collateral circulation was very feeble; there was considerable œdema of the arm, and the patient complained much of pain and numbness. The tumor was as lagre as an orange October 9th. October 11th I discovered a fresh extrav. asation above the original tumor, with pulsations extending up under the pectoralis major. By the 13th it had reached the lower border of the pectoralis minor—too high up to control by

compression, and increasing so rapidly as to call for immediate surgical interference.

After consultation with Drs. A. E. Caruthers and Hadra, we decided to tie the subclavian artery in its third division, and disarticulate the arm at the shoulder. Assisted by Drs. A. E. Caruthers, Hadra, D. R. Wallace, J. G. Given and Swearingen, on the morning of the 15th the artery was cut down upon and tied in the usual manner, over the first rib, under the influence of chloroform. Esmarch's bandage was used to secure the return of blood from the arm. The arm was disarticulated at the shoulder after Larrey's method, except that the exterior flap was made with the scalpel from without. The sack was followed up and removed with the knife. The original tumor, size of a small orange, was found to be solid; the secondary formation was semi-fluid. We were a little troubled to secure some vessels connected with the sack. The hemorrhage was not great, however. The patient was placed in bed and warm applications made and some brandy given. He soon reacted. Although a feeble man, he stood the chloroform and shock of the operation well. Under a generous diet and good nursing recovery was slow but gradual. The ligature came away the nineteenth day. There was considerable suppuration in the region of the sack, and but for a slight discharge that now exists his recovery would be complete.

I desire, in connection with this report, to call attention to a few points connected with the surgery of this operation. In the cases reported the injury to the artery occurred at about the same point—the terminus of the axillary. The first was inflicted by a knife, and resulted in hemorrhage and a diffused aneurism. The second by a pistol ball, and terminated, after a delay of twenty-eight days in circumscribed aneurism. Both cases suggest the propriety of cutting down and tying the artery, when known to be injured, above and below the point of injury. In the first case the subclavian artery was

tied, but the artery, at the point of injury, was not interfered with, except the clot was turned out. The arm was not removed at the shoulder, although my judgment was that gangrene would follow, and did so in twenty-four hours, and the arm was promptly disarticulated at the shoulder. There was secondary hemorrhage at the distal end of the artery at clavicle, but was controllable by pressure. The patient recovered. In the second case, as a last resort the subclavian was tied; and believing the prospect of recovery would be greatly increased by removal of the arm, and that if retained and recovery did take place the arm would not only be useless, but an incumbrance and a life-long source of annoyance, it was therefore removed. Recovery was the result, and without secondary hemorrhage.

Two cases, as a matter of course, do not go far toward establishing a rule of action in an operation of this character. I will make this proposition, however, and will try to make it hold good by further data on the subject. If there is disease or injury in the axillary region necessitating ligation of the subclavian artery, disarticulation at the shoulder is necessitated also, for the safety of the patient. As an argument in favor of this proposition I ask your attention to the anatomy of the parts. From where the subclavian passes over the first rib down to the inferior fold of the axilla there are six or seven pretty large branches given off; recurrent branches below this point to the anastamosis with branches given off above the first rib are few and small, and cannot be relied upon to conduct the reparative and nutritive processes demanded in the case. Besides, the condition of the artery between the first rib and the fold of the axilla (where second ligature is likely to be required) is in a condition, I might say, almost to force secondary hemorrhage from the distal end of the artery as soon as the ligature cuts through. In attempting, therefore, to save the arm in this state of the case, we have ample reason to expect an unfavor-

able result, either by losing the arm or the patient, most likely both, arising from gangrene, hemorrhage, suppuration, septicemia, or other causes evolved by attempting to save the limb. Should an unfortunate result not follow, and the patient recover without the loss of the arm, it will not only prove a useless appendage, but a source of annoyance and an encumbrance in three out of every five cases that make such recovery.

In further support of this opinion I tabulate the following cases, which speak for themselves.

It will be perceived that the ratio of mortality from the operation runs very high, and the ligature of the axillary gives no better results. It is to be regretted that the causes of death cannot be furnished in a greater number of the cases tabulated. Of the sixty deaths in the 116 cases, the causes of death furnished 22 were from hemorrhage from distal end of artery, 11 from gangrene of the arm, 5 from inflammation and suppuration of aneurismal sack; and supposing a proportional number of the 5 cases unaccounted for died in like manner, we would have 41 of the 60 deaths incident to the attempt at saving the arm in the operation. Deduct the ratio of mortality for disarticulation at the shoulder, 28.5, and you have about 30 deaths, or 50 per cent. due to causes arising from attempting to save the arm. With the ratio of mortality for disarticulation deducted, take into further consideration that in three out of every five cases of recovery the arm is paralyzed and otherwise useless, as shown by the Surgeon General's Report.

With these figures and facts before us, my proposition is not without warrant, and in performing ligation of the subclavian artery it behooves the surgeon to consider well before attempting to save the arm, and by so doing kill the patient.

TABLE OF CASES OF LIGATION OF SUBCLAVIAN ARTERY.

	No. of Cases	Cases of Recovery.	Cases of Death	Ratio
Dr. Norris, Am. Jour. Med. Soc., 1845, vol. X., page 13...	69	36	33	47.8
Surgeon General's Office	53	11	42	79.2
Surgeon General's Office—of the above tabulated, all from gun-shot injury	25	5	20	80.
Dr. Wilhelm Kocks, Berlin, 1869	212			
Of this number tabulated for injury	73	25	48	65.7
Prof. Willard Parker, Trans. Am. Med. Association, vol. XVIII., page 246 gives	196			54.5
No. of above for operation aneurism	70			68.5
Prof. Billroth, Chirurg. Briefe, 1870, reports	5	1	4	80.
Dr. Guthrie, Diseases and Injuries of Arteries	22	15	7	
Surgeon General's Office, part 2d, page 442, Ligations, Axillary	15	3	12	75.
Do., page 426, Brachial	76	55	21	27.6
Do., Amputation by Disarticulation at Shoulder Joint	852	591	236	28.5
No. of cases tabulated, causes of death known	116	56	60	

No. of deaths from hemorrhage, 21; from gangrene of the limb, 11; suppuration and sloughing of sack, 5; inter-thoracic inflammation, 6; exhaustion, 5; pyæmia, 3; bursting aneurism, 1; inflammation, 1; effusion on brain, 1; unaccounted for, 5.

REMARKS UPON THE HEPATIC COMPLICATIONS OF DYSENTERY AS IT OCCURS IN THE CLIMATE OF TEXAS.

BY B. E. HADRA, M. D.

Gentlemen:

I desire to bring before you a subject which, though not new, has not received from the profession that attention which its importance demands. You all know of the close connection between dysentery and abscesses of the liver. The formation of these abscesses is generally considered as an embolic process, caused by transmission of purulent matter from the ulcers of the intestine into the vessels of the liver by the portal circulation. This process, of course, cannot be the rule, but a rare accident. Thus, if we have to deal with a disease where enlargement, inflammation and abscesses of the liver, or one of these changes is an invariable and at the same time one of the earliest symptoms, then we are compelled to infer, either that the disease is not the common form of dysentery, or that the complication of the liver has not received sufficient attention. It is not an easy matter to make out which position is the correct one. According to Baumler in Ziemssen's Cyclopedia, affections of the liver in Europe are rare and confined to embolic abscesses, whilst he mentions a form of "hepatic dysentery" as a tropical disease, observed mostly in India by English physicians (Annesley, etc.) and being distinguished from the common or European form by the constant affection of the liver. The author there, expressly says, that "at any rate this affection is not to be confounded with the

hepatic abscesses of embolic origin, which also occcur here (in Europe) and sometimes follow chronic dysentery." Thus the Cyclopedia takes the view that there are two different forms of dysentery, which have nothing in common but a similar affection of the intestine. On the other hand, I find in Aitken's text-book a compilation of the views of different authors, leading to the conclusion that, "dysentery in a great number of cases, more than a half, commences and runs its course, complicated by obvious functional hepatic diseases." Aitken only knows *one* form of dysentery and takes, as shown, the hepatic affection as a proper symptom of the disease, saying further, "that the hepatic disorder and the dysentery acknowledge a common cause and disease-process." Whatever may be correct, whether there are two distinct forms, or whether the affection of the liver has been overlooked from its relatively less gravity in Europe—whatever be the right position, I venture to state that the form of dysentery we have to deal with in Texas, is almost exclusively this hepatic form. There is hardly a single case without inflammatory enlargement of the liver; and of course, a good many cases, where abscesses form as a most unhappy result of this inflammation.

This, then, is the object of this paper—to call your attention to the condition of the liver in a disease which is so extremely common with us, and in which this important and dangerous addition is so liable to be overlooked.

The hepatic complication should be considered first in acute, and secondly in chronic dysentery. The acute form very often presents, in the first stage, the aspect of typhoid fever. There is restlessness, low delirium, increase of temperature, diarrhœa, puffiness of the bowels, etc. As in many cases the stools contain no blood at all, as the stools in other cases very often resemble the pea-soup defecations known as typhoid stools, an error is easily made. But taking into consideration the swelling of the liver, a correct diagnosis can hardly be avoided.

Percussion of this organ will fail to make out the enlargement, only when the transverse colon is too much distended; but even then the fullness of the epigastrium and the changed contour of the left angle of the right lobe of the liver will suffice to throw light upon the case. Enlargement of the liver and no increase of the spleen will be as good an indication against typhoid fever, as an enlarged spleen with absence of a swollen liver will serve to corroborate the diagnosis of hepatic dysentery. As said before, the stools do not always contain blood—even constipation may be present; and it is necessary to know that the danger and gravity of the hepatic affection is no way proportionate to the intestinal symptoms. It is of the greatest importance, therefore, to direct our attention, even in seemingly light forms, to the liver.

In regard to treatment, directed to the liver, I will make the following short suggestions: If there is soreness over the region of the liver, apply warm poultices, which will afford relief. In addition use mercurial inunctions over the liver. (I prefer the common blue ointment, as it acts as a strong derivative by its blistering properties.) I do not doubt that mercury has a very beneficial effect upon the inflammation of the liver. But early surgical interference will be the most important therapeutical procedure in cases where there is the least suspicion that abscesses are forming or have formed. I am aware that there is nothing new in this recommendation. Of course, an abscess has to be emptied, as is taught by all good authorities. Nevertheless it will be of value to go over the ground again.

First, at what period have we to expect the formation of pus, and, consequently how long have we to defer surgical treatment? This will vary from a few days to a few weeks. I am satisfied that in most cases the pus will be found in the first two or three weeks if it forms at all. It is evident that the active inflammatory stage is most favorable to its formation. Judging by analogy with similar processes elsewhere, we are not

[illegible] much relieved; stools easy, col[illegible] [illegible] slow decline of the fever. The liver s[illegible] [illegible] the apex of the ribs, aspiration of the liver [illegible] [illegible] the twelfth day of illness resulting [illegible] [illegible] of eight ounces of good [illegible] [illegible] in steady convalescence. [illegible] [illegible] regular. Entire recover[illegible] [illegible] to the condition and [illegible] [illegible] of dysentery, but it is of [illegible] [illegible] in its chronic form. T[illegible] [illegible] of the connection between the [illegible] [illegible] in consequence of the [illegible] [illegible] the occurrence of the dys[illegible] [illegible] of the liver [illegible] [illegible] his slight [illegible] [illegible] which might be co[illegible] [illegible] or abscess of the liver. [illegible] [illegible] of the liver, chro[illegible] [illegible] and consumption. [illegible] [illegible] frequently used [illegible] [illegible] It has no [illegible] [illegible] the size of the liver. [illegible] [illegible] disease. Chronic [illegible] [illegible] the liver upon [illegible] [illegible] the portal circulation [illegible] [illegible] magnitude of the [illegible] [illegible] chronic septic dysen[illegible] [illegible] [illegible] [illegible] the abscess. [illegible] [illegible] [illegible]

:eive even a good practitioner. Coughing and hectic fever · also symptoms likely to mislead. Coughing' in these cases, a reflex process, caused by irritation of the diaphragm. The lowing case might serve as an example:

T., a Frenchman, twenty-eight years old, had been ill for about 'o years when I first saw him with Dr. Weisselberg, of Austin. e could give no clear history of former diseases; felt weak-ɜss and was coughing, the only trouble complained of; *status resens,* complains of annoying cough, heaviness about the stom-ch, indigestion, irregularity of bowels. He was working in an :e factory. There was perfect dullness from the lower margin of the scapula downward over the whole right side; no respira-ory murmur audible; vocal fremitus absent; the upper lobe of ight lung slightly duller upon percussion than on the left side; catarrhal, rough respiration; liver enlarged in front about one inch. Diagnosis: chronic pleuritic effusion; thoracentesis pro-posed but refused. The patient died a year after my first exam-ination. Autopsy: an immense destruction of the right lobe of the liver, forming a cavity which contained about two gallons of a reddish-looking, purulent liquid. In the large intestines there were diphtheritic ulcers, mostly healed or healing.

An erroneous diagnosis in such cases can be obviated by attention to the following points, as I believe: 1. A history of dysentery. 2. A peculiar greyish-yellow hue of the skin. 3. Puffiness of the abdomen, which remains for years in a condi-tion of partial paralysis. 4. The increased area of dullness post-eriorly is found to be connected with anterior dullness, due to an enlarged liver. 5. Mensuration will show that the enlarge-ment of the right side of thorax is below the lung. Mensuration of the thorax deserves special attention, indicating with greater certainty the amount and the situation of the enlargement.

It will readily appear how consumption may be confounded with chronic inflammation of the liver. The enlarged liver compressing the lung, will occasion slight dullness upon per-

cussion, increased vocal fremitus and harsh respiration, but by attention to the above mentioned symptoms, and bearing in mind that the tubercular signs first appear in the apices of the lungs, this error can be avoided. The following is a case where such an error was made:

Mr. H., forty-five years of age, has been complaining for two years; knows very little about the first symptoms of his disease: he simply states that he has been getting feeble, coughing, becoming emaciated and troubled with irregular bowels, the usual statement of a consumptive, which was the diagnosis of several good physicians who saw him. When the case came under my charge pronounced symptoms of dysentery were present, which first required attention. Examination revealed mild catarrh of right lung and an extensive swelling of the liver, which was very tender upon pressure, and, as the patient said, troubled him nearly all the time he was sick. Mensuration showed enlargement of right side of thorax below sixth rib for about half an inch. Diagnosis: inflammation of liver, probably abscess. Surgical treatment refused. Saw him lately again, one year after the first acquaintance. The patient suffered at intervals more or less, coughing sometimes for a week, then getting better; condition of liver unchanged; bowels irregular. Puncture of the liver yet refused, but I expect his final consent may be obtained, when it may be too late.

Now, as to the question of therapeutics, nothing has to be added to what was said about the surgical treatment of acute casses, but that in abscesses of larger size the establishment of a large opening will be by far preferable to simple aspiration. Drainage can be easier had, and contraction of the cavity, or rather the approaching of the walls will be so much better accomplished, which latter principle was first studied by Roser and Simon, in the surgical treatment of pleuritic accumulations. In some cases it may be advantageous to resect one or more

ribs, in order to reach and thoroughly evacuate the abscess, as in corresponding pleuritic troubles.

I intentionally refrained from a minute description of the disease, and from giving account of the pathological changes in the different organs, because this part of the subject has been thoroughly elucidated in the text-books.

In conclusion, I repeat, that the object of this paper is to call your attention to the fact that dysentery in our climate is almost always complicated with some alteration of the liver, and urging early and unhesitating surgical interference, whenever there is the least suspicion that an abscess has been or is about to be formed.

METASTASIS OF VACCINIA.

BY J. C. J. KING, M. D., OF WACO, TEXAS.

Lola Harris, a sprightly girl, nine years of age, daughter of James N. and Ollie Harris, of Waco, of a strumous diathesis, not having been previously vaccinated, was vaccinated with bovine virus, from an ivory point, on the 18th of February, 1878. At the same time, and from the same point, a younger brother and sister were vaccinated. That of the brother took the usual course of vaccinia, only a little more intense, developing several typical vesicles around, but separate and distinct from the point of insertion. That of the sister failed to produce any effect. On the 26th of February, eight days from the insertion of the virus, little Lola was seen again, and on finding only a small and imperfect vesicle, she was again vaccinated with bovine virus. On the 2d of March she was seen again, and the vesicle had dried up, and there was no appearance of vaccinia from the last insertion of the virus. She had her left eye bound up with a cloth, and on being asked what was the matter with her eye, said that she had a stye on her eye, at the same time raising the bandage to show it. There was no appearance of a stye at all, but an angry-looking, swollen condition of the lids, the upper lid more particularly, on the margin of which, near the external canthus was a purulent-looking spot, about a quarter of an inch in extent. The lids of the right eye were also œdematous. Being unable to determine the cause of the trouble, a light, starch poultice was directed to be applied during the night, and the bowels to be moved with sulphate of magnesia. On the 4th of March was called to see her, and found her eyelids very

much swollen, almost closed, with an erysipelatous blush around the eyes and extending across the temples; also an erythematous rash about the neck and chest in front. The cervical glands were enlarged, and there was a high grade of fever which had supervened some thirty-six hours previously. The purulent appearance which had been noticed on a small portion of the margin of the upper lid of the left eye, now involved half the extent of the margin of this lid, and had also appeared on the lower lid of the left and on both lids of the right eye. There was a small vesicle on the nose, and one or two on the lids, which led to the idea that it might possibly be vaccination, but never having seen nor read of anything of the kind, the patient was put upon treatment for erysipelas, as that seemed to be the most prominent feature, using as a local application a solution of sulphite of soda (ten grains to one ounce), applied by means of lint.

March 5th. Not so much fever; the intense redness had somewhat abated, but the swelling had increased. The purulent appearance of the margins of the lids had extended. One or two fresh vesicles were now to be seen on the nose, and one on the chin. During the day the case was seen by Dr. I. H. Sears and Dr. J. H. Caldwell, each thinking that it was probably vaccinia, but were unable to determine certainly what it was.

March 6th. Fever declining; œdema about the left eye increased; the entire margins of the lids were now involved; the vesicles were enlarging and extending in circumference, some of which were now pustular and distinctly umbilicated, which made it unmistakably a case of vaccination. During this and the next few days, nearly every member of the profession in the city availed himself of the opportunity of seeing this unusual case.

March 7th. The œdema of the lids was very great; so much were those of the left eye that they could not be separated to

see the cornea. Grave apprehensions for the safety of the eye were now entertained. Up to this time there had been a remarkable freedom from pain, but there was now considerable pain from pressure upon the eye. The process of drying up of the pustules and purulent margins of the lids had now commenced, and the fever had subsided, but not until March 12th did the œdema of the lids of the left eye subside sufficiently to ascertain whether there was any damage to the cornea. It was found uninjured. The crusts soon began to fall off, and one of them, on a portion of the margin of the left upper lid, was so deep as to remove the hair bulbs, which will result in a permanent loss of the lashes from at least one-third of the lid.

The most interesting question now in regard to this case is, what caused the process of vaccination to leave almost entirely the point of insertion and to locate about the eyes? There can be no doubt but that vaccine virus is absorbed into the blood, and in this way affects the whole system, even relieving obstinate skin diseases. Dr. Denby, of England, in 1825 reported the case of a boy some twelve years of age, who was vaccinated in the left arm, and in a few hours afterwards chanced to have an incised wound made on his right knee. This wound at first had the appearance of uniting by first intention; but on the fifth day vesicles made their appearance about the wound, which afterwards proved to be genuine vaccine vesicles, while at the same time the vaccination in the arm ran the course of the true vaccination. In this latter case there was a wound to determine the localization of the vaccinia, while in the former there was nothing apparent to induce the metastasis, nor was the vaccination regular in the arm, as it was in Dr. Denby's case. Scratching the arm and conveying the virus which was placed on the arm was suggested, but there was no abrasion to receive it. The eyes were healthy and had been for three years or more. It seems most probable that it was conveyed through

the system, after being absorbed, and from some idiosyncrasy located about the eyes.

Deeming this case of sufficient interest to make mention of it, it is hereby respectfully submitted for the consideration of the Texas State Medical Association.

FACTS AND CONCLUSIONS IN REGARD TO THE CALVERT EPIDEMIC OF 1873.

BY DANIEL PARKER, M. D.

In the autumn of 1873 the town of Calvert was scourged by an epidemic. So fearful were its ravages that "the year of the epidemic" forms an epoch in the history of the place. The silent tomb-stones in our cemetery, and the habiliments of mourning still to be seen on our streets, are mute but eloquent witnesses of its fatality. Decimation, a term that causes the stoutest heart to shudder, falls far short of declaring the harvest of death.

The nature of this epidemic is still a subject of disagreement. Prominent physicians entertain conflicting views in regard to its character, and believing that a subject of so much importance should not be dropped until it is definitely settled, I have undertaken this investigation, more, however, with the hope of provoking further inquiry than of establishing its nature.

The town of Calvert is situated on the H. and T. C. Railroad, one hundred and twenty-nine miles north of Houston, in latitude 31°, and at an elevation of about five hundred and eighty feet above the sea. The surrounding country is undulating, mostly sandy, and timbered, but occasionally interspersed with prairie of a stiffer nature, which is generally, where not in cultivation, grown up in mesquite bushes. The Brazos River is on the west, and distant, at its nearest point, about six miles. The Little Brazos runs between the main river and the town, and for the most part skirts along the edge of the uplands, thus enclosing the main bottom between the two rivers and afford-

ing as fine a system of drainage as nature ever designed. Mud Creek, on the south and east, and Walnut on the north and west, are both distant about three miles. The land adjacent to the streams mentioned contains no marshes, and there is no stagnant water in their vicinity, except in their beds, when they stop running, in dry weather. The statement made in the report of Dr. Harrison, on the epidemics of 1873, etc.,* in regard to "low, marshy lands contiguous to the Brazos," and there was "quite a formidable belt of low, marshy, swamp land" on Mud Creek, and credited to Dr. B. Powell, of Houston, is not sustained by the facts. On the contrary, I know of no marsh on either stream.

The first train of cars arrived in Calvert in June, 1869, and from that time we can date the origin of the town; consequently it was four years old at the period under consideration. For about a year it was the terminus of the road, and was the centre of an immense business. Its streets were thronged with wagons from all points in northern and northwestern Texas. The number of its inhabitants at this time was estimated as high as ten thousand. This sudden influx was for the most part transient, and consisted of a class of persons who had no interest in the town further than to avail themselves of its advantages as a trading point while it was the terminus. Many lived in tents and rude, wooden shanties, and every available foot of shelter was brought into requisition. Under such circumstances it is not likely much attention was paid to sanitary measures. What effect the state of affairs during this period may have had on the epidemic of 1873 it is, of course, impossible to say, but it will be well to bear it in mind. The buildings were mostly rude and temporary, though at the time under consideration many permanent and substantial houses had been erected. It may be well to mention, as it will bear some-

* Transactions of State Medical Association for 1875, page 30.

what upon the history of the progress of the epidemic, that the direction of the railroad through town is from southeast to northwest, or nearly so, and that the streets run parallel with and at right angles to the railroad; that Main street is the first on the southwest side, and Railroad street the first on the northeast side of the railroad, and that much the larger part of the private residences are on the northeast side, and on rising ground.

All agree that previous to and at the time of the development of the epidemic the town was scarcely decently clean, and that no attention was paid to sanitary measures. All also agree that for some months previous malarial diseases had prevailed to an unusual extent in the town and surrounding country, and that the temperature during the preceding summer had been unusually high, with a heavy rain-fall. The population at this time was about twenty-five hundred, one thousand of whom were negroes.

Having thus taken a hasty survey of the town and its surroundings, we are better prepared to study the subject under consideration.

It seems that on the 3d of September a young man named Hughes arrived here, fleeing from yellow fever in Shreveport. On the night of the 5th he was taken sick with a chill, and Dr. Doleman was called to see him twenty-four hours afterwards, in his room, at the Haynes House. A synopsis of his symptoms, as detailed by Dr. Coleman, (New Orleans *Medical and Surgical Journal*, January, 1874, page 617), may be fairly presented as follows: Temperature high, pulse beginning to decrease, tongue heavily coated; complained of sore throat. Next day, pulse down to 84; temperature rather on the increase; tendency to hemorrhage from the mucous membrane of the mouth, throat and nostrils. The following morning (8th), pulse down to 60; temperature almost normal. This day, after imprudently dressing and walking a distance of two blocks, and taking a room up

stairs, on Main street, his symptoms were all aggravated, and he died on the morning of the 11th, throwing up black vomit.

The bedding upon which Hughes died was thrown upon the roof of a little house nearly at the south end of Main street, and there remained exposed for three weeks.

The next case was that of a clerk at the Haynes House, who was taken on the 10th, and who, after he was thought to be convalescent, relapsed and died, throwing up black vomit. Between this time and the 27th a number of cases occurred, among which was Mrs. H., proprietress of the Haynes House; Mr. E., a druggist who slept next door to the little house on which the bedding on which Hughes died was thrown; Mrs. E., who rode in a carriage on the same seat with Hughes, just before he was taken sick; and others, all traceable to the same source. The cases of Mrs. H. and Mrs. E. terminated fatally with black vomit.

The condition of affairs was now so alarming that Dr. Coleman called a consultation of the physicians of Calvert and Hearn, who, after visiting all the cases on hand (three of whom died the following night), unanimously decided that it must be yellow fever. This decision had the effect of reducing the population of the town to such an extent that by the following Monday morning not more than six hundred whites were left. At this time Dr. Coleman was taken sick, and as Drs. Eilson and Fields both fell victims shortly after, the record, so far as the local physicians are concerned, practically ceases.

On Monday, September 28th, three physicians from Houston came, in response to a telegram from the authorities of the town, viz.: Drs. Palmer, Stuart and Howard. The two first, after remaining a few hours, returned, stating that there was no yellow fever in the place; the latter remained, expressing the opinion that it was yellow fever. Meantime the epidemic was gathering strength, and about all that can be stated with certainty is that the case of Hughes was a type of those that fol-

lowed, and that of the six hundred remaining in Calvert, at least four hundred and fifty had the fever, and one hundred and twenty-five died—27.77 per cent. Or, according to Dr. Dowell, out of six hundred and fifty exposed, five hundred and fifty had the fever, and about one hundred and sixty-five died, or thirty per cent.

Among the fatal cases were two volunteer physicians, Drs. Crawford and Pye, thus rendering conspicuous that noble devotion to the cause of science and humanity of which our profession furnishes so many bright examples.

The Haynes House was located at the southern extremity of Railroad street, and the house in which Hughes died, at the south end of Main street, the railroad intervening, and the general course of the spread of the fever, until the whole place became infected, was in the direction of the prevailing wind; that is to the north, or diagonally across the town.

Unfortunately for the correct determination of the nature of this fever, no observations were made in regard to temperature, and no post mortems were held, and I have been able to find but two cases of which anything like a record was made. One case was that of Mr. Hughes, of which mention has already been made, the other that of Mrs. M., recorded by Dr. Palmer (Transactions State Medical Association 1874, page 151), in his "Report on the Epidemic in Calvert." As the case is reported by Dr. P. to prove that it was not yellow, but hemorrhagic malarial fever, I will introduce it in his own words. The case was seen in its first access:

"The symptoms were very turbulent; there was no apparent struggle between a chill and reaction; a vomit seemed to be indicated. It was thus about midnight, and I found Dr. Stuart within the hour. He saw the case with me, and prescribed thirty grains pulv. ipecac., with orders to be given at once. On our return to the case, about ten o'clock next morning, we were told the medicine had not been given. We found the patient

without fever; there was a marked intermission. I afterwards heard that the case ended with black vomit on the fifth day of the disease, and the time of the lady's death corresponded exactly with a third and fatal access of malignant intermittent which the French medical authors term 'fièvre pernicieuse,' and which seldom, if ever, survives the third access."

In regard to the protection afforded in this epidemic by previous attacks of yellow fever, this much can be stated, viz.: that some few cases occurred in persons who supposed they had been subjects of yellow fever, but the general and almost universal rule was that those who had experienced an attack of yellow fever previously did not suffer in this epidemic, and those who had not did. The telegram quoted by Dr. Palmer (Transactions State Medical Association 1874, page 156), in the report before mentioned, in these words, "This fever is attacking all, regardless of having had yellow fever before," was without foundation in fact, and no doubt had its origin in the fevered imagination of some alarmist, whose name, it is fair to presume, would have given it no weight, as it is not given by Dr. P.

Observations in regard to the urine in this epidemic show that it was generally albuminous, and suppression was a common symptom in fatal cases.

The foregoing is a brief summary of facts in regard to which, so far as I am aware, there is a pretty general agreement.

As I stated in the outset, the nature of this epidemic is still a subject of disagreement, Dr. Coleman, of this place, Dr. Dowell, of Galveston, and Dr. Howard, of Houston, having placed themselves on record as advocates of the theory that it was yellow fever, while as high authority as Drs. Palmer, Powell and Stuart, of Houston, have pronounced it hemorrhagic malarial fever. Dr. Harrison (Report on Epidemics of 1873, Transactions State Medical Association 1874), of Columbus, seems also, though rather by inference, to favor the latter view. No doubt many other medical gentlemen have expressed opinions, but so far as

I have learned, they have not appeared in any of the medical literature of the day.

I think there can be no doubt of the correctness of one of the two solutions, and I now wish to present the following reasons for the conclusion that the true solution is that it was yellow fever.

1st. That the sanitary condition of the town was not good, the foul privies, unclean streets and adjacent slaughter pens affording ample cause for the production of such an atmosphere as experience has proven to be favorable to the propagation of yellow fever, and such as has never been claimed, so far as I am aware, to be a factor in the production of malarial disease.

2d. That the first, and a typical case, was only a few days from the infected city of Shreveport, consequently the alleged malarial condition of the town and its surroundings would count for nothing in the causation of the fever in his case. He evidently brought the germs of his disease with him.

3d. All cases previous to the general infection of the town could be traced to Hughes, or the bedding upon which he died.

4th. The general exemption of those who had previously suffered from yellow fever and the susceptibility of those who had not.

5th. Of those who left town at the time of the first general alarm (and their number approximated one thousand), but very few were attacked, although many went to places much more subject to malarial diseases, while of the six hundred who remained in town, four hundred and fifty, or seventy-five per cent., were sick. Or, according to Dr. Dowell's estimate, of the six hundred and fifty remaining, five hundred and fifty, or 84.3 per cent., suffered.

6th. Yellow fever is universally a disease of cities and towns, while malarial diseases have their home in the rural districts, and there is no evidence in this case to show that malarial dis-

orders were more rife in the country during this epidemic than before or after.

7th. This disease disappeared upon the advent of cold weather, and the refugees who returned after frost did not suffer; its history thus coinciding with yellow fever.

Dr. Palmer, whose age and experience entitle his opinion to great consideration, and who has contributed more to the history of this epidemic than any other advocate of the malarial theory, gives, in his report on the "Epidemic in Calvert," as a reason why this was not an epidemic of yellow fever, that "it did not bear the pathognomonic phenomena of the disease. This, if true, would, of course, settle that part of the question; but as Dr. P., in the report just mentioned, has been kind enough to give us a definition of what he considers true yellow fever, I will reproduce it here, and then ask your attention to a comparison of the report of Mrs. M.'s case, as given by Dr. P., with his own definition. It is as follows: "By the first stage, I mean that one paroxysm, from twenty-four to seventy-two hours' duration, ushered in by marked pain in back of neck, and violent cephalagia in supraorbital and frontal region. This paroxysm is uninterrupted from end to end, and any and every abortive method to shorten its duration or create a remission, have in every instance most signally failed. Having run its own spontaneous course, it is followed by the second stage, of marked repose, of no fixed period of duration, with a weakness commensurate with the violence of the first stage, and, if not turning to convalescence, it passes to the third stage, of sinking and exhaustion, either with or without black vomit." The symptoms of Mrs. M., you will recollect, were described as "turbulent, with an apparent struggle between a chill and reaction." We are left to suppose the exact meaning of turbulent, but I think we may fairly infer a period of excitement, high pulse and temperature; in fact, a paroxysm that would come within the scope of his definition of the first stage, though,

according to his report, not lasting twenty-four hours. Now, what comes next? "On our return to the case, at ten o'clock next morning, . . . we found the patient without fever." Where is the inconsistency of considering this the second stage, of marked repose. The sequel of the case is that the lady died on the fifth day of the disease, with black vomit, thus closing the third stage of yellow fever; and, although the time may have "corresponded with a third and fatal access of malignant intermittent," the inference that she suffered from a third paroxysm is pure assumption; the record does not show it. It is a matter of regret that the thermometer was not used in the case of Mrs. M. and others, as one cannot resist the suspicion that at the time they were considered free from fever it would have indicated a high temperature. We are not wanting in authority to show that the touch is not a reliable guide. Le Monnier, in his report on the "Yellow Fever Epidemic in Memphis" (New Orleans *Medical and Surgical Journal*, January, 1874), says: "Often, while to the touch the temperature was normal, the thermometer would show high fever," and cites a case in which the pulse was 88–80, and the skin cool and pleasant, while the thermometer indicated 102.5. Sternberg, in his paper on the "Nature and Duration of Yellow Fever" (*American Journal of Medical Science*, July, 1875, page 102), says: "It is not surprising that before the adoption of exact means of measurement, the mistake should have been made of pronouncing the fever in such cases as are mapped on Plat I. a fever of few hours' duration. In these cases, the flushed face, the cephalagia, pain in the loins, and acceleration of the pulse which mark the onset of the disease, quickly disappear, and the patient, *in the course of a few hours*, may pronounce himself quite well. An elevation of two, or even three degrees, may, under such circumstances, escape detection by the most practiced touch."

In view of the foregoing statements, it is not improbable that the use of the thermometer in Mrs. M.'s case would have shown

that the first stage lasted at least as long as twenty-four hours, and would have revealed the "pathognomonic phenomena" of yellow fever.

While on the subject of Dr. Palmer's report, I will introduce, for the purpose of showing the kind of cases on which he bases his opinion, another case, reported on the same page with Mrs. M.'s. He does not inform us where it occurred, but cites it as a case of malignant intermittent. It is as follows: It was the case of "a young lady of sanguinous-lymphatic temperament, to whom I was called in the height of the second access of fever, which was very turbulent and alarming, and after about eight hours a decided intermission took place, and the case yielded most happily to sulphate of quinia in bold and repeated doses. A profuse hemorrhage (epistaxis) took place on the second day of my attendance, and I have not the least doubt but that a third access, uncontrolled, would have ended in fatal black vomit." And this, the gentleman tells us, "was not yellow fever." Most assuredly not; simply a case of intermittent fever, in which the nose bled (possibly greatly to the relief of the patient), and which yielded most happily to quinine. I am certain that the gentlemen present see many such cases every year, and yet this is cited as a parallel case with that of Mrs. M. I must confess I fail to see the similarity. I think the reader cannot fail to note the difference in the treatment of the two cases. The case of the young lady "yielded most happily to sulphate of quinia," while that most potent drug is not mentioned in connection with Mrs. M.'s case—a strange omission in an advocate of the malarial theory.

A large portion of Dr. Palmer's report is occupied by an argument, evincing considerable research, to show that black vomit occurs in malignant intermittent. This, I presume, will not be denied by any physician of much experience with the malarial diseases of this climate. The advocates of the yellow fever theory in this epidemic only claim that black vomit is a more

constant and universal symptom in yellow fever than in any other disease, which I believe is generally admitted.

It is not necessary to lengthen this paper by a review of the case of Hughes. It falls entirely within the scope of Dr. Palmer's definition.

In regard to the intermittent and remittent character of this fever, upon which point conflicting observations have oppressed some investigators with such humiliating reflections, I think it is fair to conclude that some cases were intermittent during some period of the attack, whilst others were continued throughout, thus giving gentlemen who differ credit for correct and candid observation. Is it surprising that in a malarial district, and during unusual prevalence of malarial diseases, that an attack of any disease should be complicated by malarial symptoms? On the contrary, does not universal experience prove that such is the case? On this point I will quote again from Le Monnier's paper on the epidemic in Memphis, which was raging at the same time as the fever under consideration. Under the head of the character of the epidemic, he says: "What struck us most forcibly in this epidemic was, 1st, the mode of death, which was, with few exceptions, a quiet one, brought on by the direct sedative effect of the poison; and 2d, the malarial paroxysm complicating most cases, which, indeed, at first led us to believe there was but little yellow fever in Memphis. Some fell sick with an ordinary attack of malarial fever. The fever was broken, came back, and this time proved itself to be yellow fever. Or else it will be after an attack of yellow fever that the intermittent fevers will show themselves."

And, to quote again from Sternberg. After illustrating the tendency to remission at periods of two days or a multiple thereof, he says: "This remarkable tendency, shown especially in mild cases, might be ascribed to the combined effects of yellow fever and a tertian form of malarial fever, but for the fact that the latter form of fever prevails to but a very slight extent

at either of the localities mentioned (Fort Barrancas and Governor's Island), and for the more telling fact that we shall find our period of two days or a multiple thereof attending us in our further investigations as to the duration of yellow fever. This characteristic of the disease, to which, so far as I know, attention is now called for the first time, may require a modification of the statement just made, to the effect that yellow fever presents more points of resemblance to typhoid than any other fever. This tendency to periodicity certainly gives it a strong family likeness to the malarial fevers."

A reference to the graphic tracings of temperature, which are the foundation of Dr. Sternberg's paper, fully establishes the quotation just made. If, then, such is the intrinsic tendency of yellow fever, as proved by observation made in localities where malarial fevers prevail to but a slight extent, may we not reasonably expect this periodicity to become more salient in a malarial district, and during unusual prevalence of malarial diseases?

In regard to the alleged frequency of attacks in persons who had previously suffered from yellow fever, this much may be said: it was the exception and not the rule; and I presume it will not be denied that many epidemics furnish such exceptions. If any should object that the cases are too numerous to be accounted for under the head of exceptions, I would remind them that most of the attacks occurring in persons who considered themselves protected were cases of those who had suffered during some of the several epidemics that have visited the inland towns and villages of this State, *e. g.*, Hempstead, Navasota, Brenham, etc., epidemics in regard to the character of which the same doubts are entertained as of the one under consideration. Further, the difficulty of arriving at the truth in regard to who has or has not suffered from yellow fever in epidemics occurring in towns and villages such as above mentioned is very great. The inevitable panic colors everything,

and every ailment occurring during the fatal period is attributed to one and the same cause. No doubt some cases of intermittent and remittent fever occurring in this place during the period under consideration were incorrectly diagnosed as yellow fever. If such was the case, it will help to explain the discrepancies of different observers.

Thus, gentlemen, I have briefly noticed the facts as I have obtained them, in regard to the Calvert epidemic, and given my conclusions in regard to its character, as well as noticed the arguments of those who maintain the malarial theory. In regard to the facts, I invite correction if in error, and in regard to my conclusions, criticism. The truth is what we want.

I will not weary you with any comparison of this epidemic with those prevailing simultaneously in Memphis, Tenn., Shreveport, La., and other towns in Texas, though I think it would throw additional light on the subject.

It has been proposed as a solution of all the difficulties connected with this subject to invoke the aid of a new name, and call the disease under consideration "Texas yellow fever." This name, if adopted, would simply amount to a confession of ignorance as to its true character. It is true, our commonly-accepted nosology presents many instances in which diseases have taken the names of localities, and if any State has a right to the distinction of having a fever of its own, no doubt the claims of Texas are entitled to great consideration, but the progressive spirit of medical science, at the present day, forbids the adoption of a nosology based on geographical lines rather than on pathological conditions; and recognizing in every disease, however modified by circumstances, an entity one and the same, regardless of the place of its appearing, requires in the adoption of a name for a disease some recognition of its pathology. If the disease under consideration was "Texas yellow fever," who will tell us what Texas yellow fever is?

CONSTITUTION

—OF THE—

TEXAS STATE MEDICAL ASSOCIATION.

ARTICLE I.

The name and style of this Association shall be the "TEXAS STATE MEDICAL ASSOCIATION."

ARTICLE II.

The objects of this Association shall be to organize the Medical Profession of the State in the most efficient manner possible; to encourage a high standard of professional qualification and ethics, and to promote professional brotherhood.

ARTICLE III.

There shall be only one class of members in this Association. Every regularly educated man within the limits of the State, who is a graduate of a regular Medical College in good standing, and who adopts and conforms to the Code of Ethics of the American Medical Association, shall be eligible to membership in this body.

ARTICLE IV.

SECTION 1. The officers of this Association shall be, one President, three Vice Presidents, one Secretary and one Treasurer.

SEC. 2. The President and Vice Presidents shall be elected for one year; the Secretary and Treasurer shall be elected, each, for five years, and every officer shall remain in office until his successor is duly elected and installed.

ARTICLE V.

SECTION 1. It shall be the duty of the President to preside at all meetings of the Association, when present; to give the casting vote; to see that the rules of order and decorum are enforced in all deliberations of the body; to sign the approved proceedings of each meeting, and to approve such orders as may be drawn upon the Treasurer for expenditures ordered by the Association.

SEC. 2. It shall be the duty of the first Vice-President to preside in the absence of the President, and in the absence of the President and first Vice-President, the second Vice-President shall preside, and in the absence of the President, first and second Vice-Presidents, the third Vice President shall preside.

SEC. 3. In the absence of the President and all the Vice-Presidents, the Association shall, by ballot, elect one of its members to preside *pro tem.*

SEC. 4. It shall be the duty of the Secretary to keep a true and correct record of the proceedings of each meeting, preserve all books, papers and things belonging to the archives of the Association, attest all orders drawn upon the Treasurer for moneys appropriated by the Association, keep the accounts of the Association with its members, keep a register of the members, the dates of their admission and places of residence. He shall collect all moneys due from the members, and pay the same to the Treasurer, taking his receipt therefor. He shall attend all committees that may be appointed by the Association, with such documents as may be necessary for reference; report such unfinished business of previous meetings as may appear on his books, requiring action, and attend to such other business as the Association may direct. He shall also supervise and conduct all the correspondence of the Association.

SEC. 5. It shall be the duty of the Treasurer to receive all

moneys delivered to him by the Secretary, passing his receipt for the same, and to pay moneys endorsed by the President and attested by the Secretary, and if required, to give bond for the faithful performance of the duties of his office.

ARTICLE VI.

Vacancies occurring in the offices of the Association shall be filled by appointment by the President.

ARTICLE VII.

County Medical Associations shall be entitled to two delegates to the meetings of this Association for every ten members comprising their societies, and one for every additional five members, and shall have two votes upon all questions; and all Medical Colleges in the State, holding charters from the State, with seven professors, shall be entitled to two votes; and no member shall be allowed to vote who is not a delegate of some Association or Medical College, except such member living in a county where no Association exists, said county delegates being entitled to one vote.

ARTICLE VIII.

This Constitution shall immediately take effect from its adoption.

BY-LAWS.

ARTICLE I.

The Texas State Medical Association shall meet annually, at such time and place as may be determined by the majority of those members attending the previous meeting.

ARTICLE II.

Fifteen members, or any number over, shall constitute a quorum for business.

ARTICLE III.

The President shall call the meeting to order, cause the Secretary to read the proceedings of the previous meeting, which, after approval, shall be adopted.

ARTICLE IV.

In case there be no quorum, the meeting shall adjourn from day to day until such quorum be had.

ARTICLE V.

The fee of admission shall be five dollars, U. S. currency, and the annual dues of each member, two dollars and fifty cents, U. S. currency.

[Amendment adopted seventh annual session, 1875.

On motion of Dr. M. A. Taylor:

Resolved, That the By-Laws of the State Medical Association be so changed as to tax the members of the Association the sum of five dollars, instead of two dollars and fifty cents, per annum, and that each member of the various County organizations be taxed the sum of one dollar per annum.]

ARTICLE VI.

The usual parliamentary rules governing deliberative bodies shall govern the business workings of this Association.

ARTICLE VII.

All questions of business before this Association shall be determined by a majority of the votes present, except as to censure or expulsion of a member, in which case a two-thirds vote shall be required.

ARTICLE VIII.

It shall be the duty of the President to deliver, at each annual meeting of this Association, an address, and, in addition, the Association shall elect by ballot, one member to read an essay upon some medical subject of his own selection.

ARTICLE IX.

A committee of one member from each county represented shall constitute a Committee on Nominations for officers and place of meeting. Said committee shall report action one day prior to adjournment.

ARTICLE X.

No member of this Association, or delegate, shall absent himself from a meeting of this Association without special permission of the President, or from the session without the consent of the Association; the sense of the Association to be taken by vote.

ARTICLE XI.

The Secretary of the Association shall receive, as a compliment, at each annual session, a draft order from the President upon the Treasurer, for the sum of two hundred dollars, for valuable services rendered the Association; said order to be paid by the Treasurer; and he shall also be allowed to draw upon the Treasurer, as usual, for expenses incident to the office.

ARTICLE XII.

It shall be the duty of the President, three months prior to each annual meeting of this Association, to notify, by circular, the profession of the State (and urge attendance), and county organizations throughout the State.

JUDICIAL COUNCIL.

A Council, consisting of twenty-one members, shall be appointed by the Nominating Committee, whose duty it shall be to take cognizance of, and decide, all questions of an Ethical or Judicial character that may arise in connection with the Association. Of the twenty-one members of the Council first appointed, the seven first named on the list shall hold office for one year, and the second seven named shall hold office two years.

With these exceptions, the term of office of members of the Council shall be three years, being appointed by the Nominating Committee annually.

The said Council shall organize by choosing a President and Secretary, and shall keep a permanent record of its proceedings. The decisions of said Council, on all matters referred to it by the Association, shall be final, and shall be reported to the Association at the earliest practicable moment.

All questions of personal character, including complaints and protests, and all questions on credentials, shall be referred at once, after the report of the Committee of Arrangements or other presentation, to the Judicial Council, and without discussion.

SECTIONS.

The general meeting of the Association shall be restricted to the morning sessions; and the afternoon sessions, commencing

at three o'clock, shall be devoted to the hearing of reports and papers and their consideration, in the following sections:

1st—Practical Medicine, Materia Medica, and Pathology.

2d—Obstetrics, and Diseases of Women and Children.

3d—Surgery and Anatomy.

4th—Medical Jurisprudence, Chemistry, and Psychology.

5th—State Medicine, and Public Hygiene.

The Chairman and Secretary of the several sections shall, like other officers of the Association, be nominated by the special committee of one member from each county represented at the meeting, and elected by a vote on a general ticket. They shall hold their office until the close of the proper business of the annual meeting next succeeding their election, and until their successors are appointed.

The section on State Medicine and Public Hygiene shall be composed of one member from each county, representing, as far as practicable, the County Board of Health. The officers of this section to be also designated by the Committee of Nomination.

The Chairman of the several sections shall prepare, and read in the general sections of the Association, papers on the advance and discoveries of the past year in the branch of science included in their respective sections; the reading of such papers not to occupy longer than forty minutes for each.

Papers appropriate to the several sections, in order to secure consideration and action, must be sent to the Secretary of the appropriate sections at least one month before the meeting which is to act upon them. It shall be the duty of the Secretary, to whom such papers are sent, to examine them with care, and, with the advice of the Chairman of his section, to determine the time and order of their presentation, and to give due notice of the same; and after their full examination and discussion by the section, they shall be sent to the permanent Secretary of the Association.

No paper shall be read before either of the sections, the reading of which occupies more than twenty minutes. Such papers shall be referred by the section to sub-committees, especially appointed for their examination. The sub-committees shall be allowed thirty days for such examination; at the end of which time they shall forward the papers to the Committee of Publication, with such recommendations as they may deem proper. The author of such papers, however, may read abstracts before the section within the allotted twenty minutes. No member shall address the section more than once upon the same subject, nor speak longer than fifteen minutes without unanimous consent.

All papers presented directly to the Association, and other matters, may, at the direction of the Association, be referred to the various sections for their consideration and report.

STANDING COMMITTEES.

The following are the standing committees of the Association, to be filled by the Committee on Nominations, and to report at the next annual meeting subsequent to their appointment, viz.: Committee of Arrangements; Committee of Publication; Committee on Prize Essays; and Committee on Texas State Medical Necrology.

The Committee on Publication shall append to each volume of the Transactions hereafter published, a copy of the Constitution, By-laws, Code of Ethics of the Association, and a complete list of all members in full fellowship, and their respective places of abode.

It shall print conspicuously at the beginning of each volume of the Transactions, the following disclaimer, viz.: The Texas State Medical Association, although formally accepting and publishing the reports of the various standing committees, holds itself wholly irresponsible for the opinions, theories, or

criticisms therein contained, except when otherwise decided by special resolution.

The Committee on Prize Essays shall consist of five members, residing in the same neighborhood, whose duty it shall be, in the interval between the present and the next succeeding annual sessions, to receive original papers upon any medical subject, from any person who may choose to send them; to decide upon the merits of these papers, and to select for presentation to the Association, at its next session, such as they may deem worthy of being thus presented. The committee shall have power to form such regulations, as to the mode in which the papers are to be presented, and as to the observing of secrecy, as they may think proper; and also to award one prize of one hundred dollars to the best original communication reported on favorably by them, and directed by the Association to be published.

The Committee on Texas State Medical Necrology shall consist of one member for each county represented in the Association, whose duty it shall be to procure memorials of the eminent and worthy dead among the distinguished physicians of their respective counties, and transmit them to the chairman of this committee on or before the first of April of each and every year.

THE PUBLICATION OF PAPERS AND REPORTS.

No paper or report shall be entitled to publication in the volume for the year in which it shall be presented to the Association, unless it be placed in the hands of the Committee of Publication on or before the first day of July. It must also be so prepared as to require no material alteration or addition at the hands of its author.

Authors of papers are required to return their proofs within

two weeks after their reception; otherwise they will be passed over and omitted from the volume.

The Committee of Publication shall have full discretionary power to omit from the published Transactions, in part, or in whole, any paper that may be referred to it by the Association or either of the sections, unless specially instructed to the contrary by vote of the Association.

ORDINANCES.

Resolved, That the several sections of this Association be requested in the future to refer no papers or reports to the Committee of Publication, except such as can be fairly classed under one of the three following heads, viz.:

1st. Such as may contain and establish *positively* new facts, modes of practice, or principles of real value.

2d. Such as may contain the results of well-devised original experimental researches.

3d. Such as present so complete a review of the facts on any particular subject as to enable the writer to deduce therefrom legitimate conclusions of importance.

Resolved, That the several Sections be requested, in the future, to refer all such papers as may be presented to them for examination by this Association, that contain matter of more or less value, and yet cannot be fairly ranked under either of the heads mentioned in the foregoing resolution, back to their authors with the recommendation that they be published in such regular medical periodicals as said author may select, with the privilege of placing at the head of such papers: "Read to the ——— Section of the Texas State Medical Association on the —— day of ———, 18—."

Resolved, That at the future meetings of the Texas State Medical Association, no Report of Standing Committees or communications shall be read before the Association which

exceeds twenty pages of letter paper. (Vide Trans. Seventh An. Ses., p. 33.)

Resolved, That to the end of securing the establishment of a National Board of Health by Congress, this Association solicits the coöperation of the State Medical Associations of the sea-board States, and of the members of Congress from this State. (Vide Trans. Seventh An. Ses., p. 16.)

Resolved, That in the opinion of this Association, towns, cities and corporations should not rely upon quarantine alone as preventive of yellow fever, since, in these days of rapid inter-communication, absolute quarantine is impracticable. We therefore recommend the strictest hygienic measures — complete drainage, removal of all putrescent accumulations, animal or vegetable—as promising the best means of protection. (Vide Trans. Seventh An. Ses., p. 32.)

Resolved, That we, as an Association, and members of the medical profession, have not arrayed ourselves in opposition to the press. We recognize in it a power second to no other, when properly exerted, to effect much good, yet we feel that the placarding and advertising resorted to by quacks, and even, sometimes, by ostensible members of our Associations, is highly reprehensible, in that they make false assurances and promise cures not warranted by science; but between these and the true physician, having the good of humanity alone in view, and a strict regard for truth, the press has heretofore failed to make any distinction—stating whatever the impostor may pay for, without any regard to the merit of the party. Therefore the public at large, as well as the medical profession, have reasonably concluded that he who thus asserts his claims to superior merit, even though he may wear the badge of membership to our Association, is a quack, charlatan and impostor, trading in his profession, and bidding for the confidence of the ignorant and credulous. (Vide Trans. Seventh An. Ses., p. 19.)

Resolved, That all members of this Association in arrears for dues, over fifteen months, shall stand suspended, and their names be dropped from the roll, the same to be reinstated at any time by paying up all back dues. It shall be the duty of the Secretary to notify all members behind for dues, immediately after the adjournment of this body, and request immediate payment. (Vide Trans. Eighth An. Ses., p. 21.)

Resolved, That all physicians recognized as members in the original organization of the Association, be permitted to perfect their membership by the payment of the regular fees and dues to date. (Vide Trans. Eighth An. Ses., p. 28.)

Resolved, That County Societies be requested to furnish a list of physicians in the county, as well as of members; to give population of county, number of births, deaths, cause of death, age at death, sex and race; diseases that have prevailed; localities, with a description of the latter, in order to ascertain, if possible, the causes of disease; also an abstract of contents of papers read, an abstract of discussions, surgical operations and results. (Vide Trans. Eighth An. Ses., p. 31.)

Resolved, That the State Medical Association, anxious as it is to do all in its power to prevent the appearance of yellow fever or other malignant disease, or to mitigate their severity should any portion of our State be visited, do hereby advise and earnestly urge upon the authorities and people of all localities liable to be visited by such diseases, the prompt adoption and rigid enforcement of proper sanitary regulations, and to appoint Boards of Health, through whom the proper rules for ventilation, fumigation and disinfection can be efficiently enforced.

Adopted and referred to the Committee on State Board of Health. (Vide Trans. Eighth An. Ses., p. 22.)

CODE OF MEDICAL ETHICS.

OF THE DUTIES OF PHYSICIANS TO THEIR PATIENTS, AND OF THE OBLIGATIONS OF PATIENTS TO THEIR PHYSICIANS.

ART. I.—*Duties of Physicians to their Patients.*

SECTION 1. A physician should not only be ever ready to obey the calls of the sick, but his mind ought also to be imbued with the greatness of his mission, and the responsibility he habitually incurs in its discharge. These obligations are the more deep and enduring, because there is no tribunal other than his own conscience to adjudge penalties for carelessness or neglect. Physicians should, therefore, minister to the sick with due impressions of the importance of their office; reflecting that the ease, the health, and the lives of those committed to their charge, depend on their skill, attention, and fidelity. They should study, also, in their deportment, so to unite *tenderness* with *firmness*, and *condescension* with *authority* as to inspire the minds of their patients with gratitude, respect and confidence.

SEC. 2. Every case committed to the charge of a physician should be treated with attention, steadiness, and humanity. Reasonable indulgence should be granted to the mental imbecility and caprices of the sick. Secrecy and delicacy, when required by peculiar circumstances, should be strictly observed; and the familiar and confidential intercourse to which physicians are admitted in their professional visits, should be used with discretion, and with the most scrupulous regard to fidelity

and honor. The obligation of secrecy extends beyond the period of professional services;—none of the privacies of personal and domestic life, no infirmity of disposition or flaw of character observed during professional attendance should ever be divulged by the physician except when he is imperatively required to do so. The force and necessity of this obligation are indeed so great, that professional men have, under certain circumstances, been protected in their observance of secrecy by courts of justice.

SEC, 3. Frequent visits to the sick are in general requisite, since they enable the physician to arrive at a more perfect knowledge of the disease—to meet promptly every change which may occur, and also tend to preserve the confidence of the patient. But unnecessary visits are to be avoided, as they give useless anxiety to the patient, tend to diminish the authority of the physician, and render him liable to be suspected of interested motives.

SEC. 4. A physician should not be forward to make gloomy prognostications, because they savor of empiricism, by magnifying the importance of his services in the treatment or cure of the disease. But he should not fail, on proper occasions, to give to the friends of the patient timely notice of danger when it really occurs; and even to the patient himself, if absolutely necessary. This office, however, is so peculiarly alarming when executed by him, that it ought to be declined whenever it can be assigned to any other person of sufficient judgment and delicacy. For the physician should be the minister of hope and comfort to the sick; that, by such cordials to the drooping spirit, he may smoothe the bed of death, revive expiring life, and counteract the depressing influence of those maladies which often disturb the tranquillity of the most resigned in their last moments. The life of a sick person can be shortened not only by the acts, but also by the words or the manner of a physician. It is, therefore, a sacred duty to

guard himself carefully in this respect, and to avoid all things which have a tendency to discourage the patient and to depress his spirits.

SEC. 5. A physician ought not to abandon a patient because the case is deemed incurable; for his attendance may continue to be highly useful to the patient, and comforting to the relations around him, even in the last period of a fatal malady, by alleviating pain and other symptoms, and by soothing mental anguish. To decline attendance, under such circumstances, would be sacrificing to fanciful delicacy and mistaken liberality, that moral duty, which is independent of, and far superior to, all pecuniary consideration.

SEC. 6. Consultations should be promoted in difficult or protracted cases, as they give rise to confidence, energy, and more enlarged views in practice.

SEC. 7. The opportunity which a physician not unfrequently enjoys of promoting and strengthening the good resolutions of his patients, suffering under the consequences of vicious conduct, ought never to be neglected. His counsels, or even remonstrances, will give satisfaction, not offense, if they be proffered with politeness, and evince a genuine love of virtue accompanied by a sincere interest in the welfare of the person to whom they are addressed.

ART. 2.—*Obligations of Patients to their Physicians.*

SECTION 1. The members of the medical profession, upon whom are enjoined the performance of so many important and arduous duties toward the community, and who are required to make so many sacrifices of comfort, ease and health for the welfare of those who avail themselves of their services, certainly have a right to expect and require that their patients should entertain a just sense of the duties which they owe to their medical attendants.

SEC. 2. The first duty of a patient is to select as his medical

adviser one who has received a regular professional education. In no trade or occupation do mankind rely on the skill of an untaught artist; and in medicine, confessedly the most difficult and intricate of the sciences, the world ought not to suppose that knowledge is intuitive.

SEC. 3. Patients should prefer a physician whose habits of life are regular, and who is not devoted to company, pleasure, or to any pursuit incompatible with his professional obligations. A patient should also confide the care of himself and family, as much as possible, to one physician; for a medical man who has become acquainted with the peculiarities of constitution, habits and predisposition of those he attends, is more likely to be successful in his treatment than one who does not possess that knowledge.

A patient who has thus selected his physician, should always apply for advice in what may appear to him trivial cases, for the most fatal results often supervene on the slightest accidents. It is of still more importance that he should apply for assistance in the forming stage of violent diseases; it is to a neglect of this precept that medicine owes much of the uncertainty and imperfection with which it has been reproached.

SEC. 4. Patients should faithfully and unreservedly communicate to their physician the supposed cause of their disease. This is the more important, as many diseases of a mental origin simulate those depending on external causes, and yet are only to be cured by ministering to the mind diseased. A patient should never be afraid of thus making his physician his friend and adviser; he should always bear in mind that a medical man is under the strongest obligations of secrecy. Even the female sex should never allow feelings of shame or delicacy to prevent their disclosing the seat, symptoms and causes of complaints peculiar to them. However commendable a modest reserve may be in the common occurrences of life, its strict observance in medicine is often attended with the most serious consequen-

ces, and a patient may sink under a painful and loathsome disease, which might have been readily prevented had timely intimation been given to the physician.

SEC. 5. A patient should never weary his physician with a tedious detail of events or matters not appertaining to his disease. Even as relates to his actual symptoms, he will convey much more real information by giving clear answers to interrogatories than by the most minute account of his own framing. Neither should he obtrude upon his physician the details of his business, nor the history of his family concerns.

SEC. 6. The obedience of a patient to the prescriptions of his physician should be prompt and implicit. He should never permit his own crude opinion as to their fitness to influence his attention to them. A failure in one particular may render an otherwise judicious treatment dangerous, and even fatal. This remark is equally applicable to diet, drink and exercise. As patients become convalescent, they are very apt to suppose that the rules prescribed for them may be disregarded, and the consequence, but too often, is a relapse. Patients should never allow themselves to be persuaded to take any medicine whatever that may be recommended to them by the self-constituted doctors and doctresses who are so frequently met with, and who pretend to possess infallible remedies for the cure of every disease. However simple some of their prescriptions may appear to be, it often happens that they are productive of much mischief, and in all cases they are injurious, by contravening the plan of treatment adopted by the physician.

SEC. 7. A patient should, if possible, avoid even the *friendly visits of a physician* who is not attending him; and when he does receive them, he should never converse on the subject of his disease, as an observation may be made, without any intention of interference, which may destroy his confidence in the course he is pursuing, and induce him to neglect the directions prescribed to him. A patient should never send for a consulting

physician without the express consent of his own medical attendant. It is of great importance that physicians should act in concert; for, although their modes of treatment may be attended with equal success when employed singly, yet conjointly they are very likely to be productive of disastrous results.

SEC. 8. When a patient wishes to dismiss his physician, justice and common courtesy require that he should declare his reasons for so doing.

SEC. 9. Patients should always, when practicable, send for their physician in the morning, before his usual hour of going out, for by being early aware of the visits he has to pay during the day, the physician is able to apportion his time in such a manner as to prevent an interference of engagements. Patients should also avoid calling on their medical adviser unnecessarily during the hours devoted to meals or sleep. They should always be in readiness to receive the visits of their physician, as the detention of a few minutes is often of serious inconvenience to him.

SEC. 10. A patient should, after his recovery, entertain a just and enduring sense of the value of the services rendered him by his physician; for these are of such a character that no mere pecuniary acknowledgment can repay or cancel them.

OF THE DUTIES OF PHYSICIANS TO EACH OTHER, AND TO THE PROFESSION AT LARGE.

ART. I.—*Duties for the support of professional character.*

SECTION 1. Every individual, on entering the profession, as he becomes thereby entitled to all its privileges and immunities, incurs an obligation to exert his best abilities to maintain its dignity and honor, to exult its standing, and to extend the bounds of its usefulness. He should, therefore, observe strictly such laws as are instituted for the government of its

members;—should avoid all contumelious and sarcastic remarks relative to the faculty as a body; and while, by unwearied diligence, he resorts to every honorable means of enriching the science, he should entertain a due respect for his seniors, who have, by their labors, brought it to the elevated condition in which he finds it.

SEC. 2. There is no profession, from the members of which greater purity of character, and a higher standard of moral excellence are required, than the medical; and to attain such eminence is a duty every physician owes alike to his profession and to his patients. It is due to the latter, as without it he cannot command their respect and confidence, and to both, because no scientific attainments can compensate for the want of correct moral principles. It is also incumbent upon the faculty to be temperate in all things, for the practice of physic requires the unremitting exercise of a clear and vigorous understanding; and, on emergencies, for which no professional man should be unprepared, a steady hand, an acute eye, and an unclouded head may be essential to the well-being, and even to the life, of a fellow-creature.

SEC. 3. It is derogatory to the dignity of the profession to resort to public advertisements, or private cards, or handbills, inviting the attention of individuals affected with particular diseases—publicly offering advice and medicine to the poor, gratis, or promising radical cures; or to publish cases and operations in the daily prints, or suffer such publications to be made; to invite laymen to be present at operations, to boast of cures and remedies, to adduce certificates of skill and success, or to perform any other similar acts. These are the ordinary practices of empirics, and are highly reprehensible in a regular physician.

SEC. 4. Equally derogatory to professional character is it for a physician to hold a patent for any surgical instrument or medicine; or to dispense a secret *nostrum*, whether it be the

composition or exclusive property of himself or of others. For, if such nostrum be of real efficacy, any concealment regarding it is inconsistent with beneficence and professional liberality; and if mystery alone give it value and importance, such craft implies either disgraceful ignorance or fraudulent avarice. It is also reprehensible for physicians to give certificates attesting the efficacy of patent or secret medicines, or in any way to promote the use of them.

ART. II.—*Professional Services of Physicians to each other.*

SECTION 1. All practitioners of medicine, their wives, and their children while under the paternal care, are entitled to the gratuitous services of any one or more of the faculty residing near them, whose assistance may be desired. A physician afflicted with disease is usually an incompetent judge of his own case; and the natural anxiety and solicitude which he experiences at the sickness of a wife, a child, or any one who, by the ties of consanguinity, is rendered peculiarly dear to him tend to obscure his judgment, and produce timidity and irresolution in his practice. Under such circumstances, medical men are peculiarly dependent upon each other, and kind offices and professional aid should always be cheerfully and gratuitously afforded. Visits ought not, however, to be obtruded officiously; as such unasked civility may give rise to embarrassment, or interfere with that choice on which confidence depends. But, if a distant member of the faculty, whose circumstances are affluent, request attendance, and an honorarium be offered, it should not be declined; for no pecuniary obligation ought to be imposed, which the party receiving it would wish not to incur.

ART. III.—*Of the duties of Physicians as respects Vicarious Offices.*

SECTION I. The affairs of life, the pursuit of health, and the various accidents and contingences to which a medical man is peculiary exposed, sometimes require him temporarily to withdraw from his duties to his patients, and to request some of his professional brethren to officiate for him. Compliance with this request is an act of courtesy, which should always be performed with the utmost consideration for the interest and character of the family physician, and when exercised for a short period, all the pecuniary obligations for such service should be awarded to him. But if a member of the profession neglects his business in quest of pleasure and amusement, he cannot be considered as entitled to the advantages of the frequent and long-continued exercise of this fraternal courtesy, without awarding to the physician who officiates, the fees arising from the discharge of his professional duties.

In obstetrical and important surgical cases, which give rise to unusual fatigue, anxiety, and responsibility, it is just that the fees accruing therefrom should be awarded to the physi cian who officiates.

ART. IV.—*Of the duties of Physicians in regard to Consultations.*

SECTION 1. A regular medical education furnishes the only presumptive evidence of professional abilities and acquirements, and ought to be the only acknowledged right of an individual to the exercise and honors of his profession. Nevertheless, as in consultations the good of the patient is the sole object in view, and this is often dependent on personal confidence, no intelligent regular practitioner, who has a license to practice from some medical board of known and acknowledged respect-

ability, recognized by this Association, and who is in good moral and professional standing in the place in which he resides, should be fastidiously excluded from fellowship, or his aid refused in consultation, when it is requested by the patient. But no one can be considered as a regular practitioner, or a fit associate in consultation, whose practice is based on an exclusive dogma, to the rejection of the accumulated experience of the profession, and of the aids actually furnished by anatomy, physiology, pathology and organic chemistry.

SEC. 2. In consultation no rivalship or jealousy should be indulged; candor, probity, and all due respect should be exercised towards the physician having charge of the case.

SEC. 3. In consultations, the attending physician should be the first to propose the necessary questions to the sick; after which the consulting physician should have the opportunity to make such further inquiries of the patient as may be necessary to satisfy him of the true character of the case. Both physicians should then retire to a private place for deliberation; and the one first in attendance should communicate the directions agreed upon to the patient or his friends, as well as any opinions which it may be thought proper to express. But no statement or discussion of it should take place before the patient or his friends, except in the presence of all the faculty attending, and by their common consent; and no *opinions* or *prognostications* should be delivered which are not the result of previous deliberation and concurrence.

SEC. 4. In consultations, the physician in attendance should deliver his opinion first; and when there are several consulting, they should deliver their opinions in the order in which they have been called in. No decision, however, should restrain the attending physician from making such variations in the mode of treatment as any subsequent unexpected change in the character of the case may demand. But such variation, and the reasons for it, ought to be carefully detailed at the next meeting

in consultation. The same privilege belongs also to the consulting physician if he is sent for in an emergency, when the regular attendant is out of the way, and similar explanations must be made by him at the next consultation.

SEC. 5. The utmost punctuality should be observed in the visits of physicians when they are to hold consultation together, and this is generally practicable, for society has been considerate enough to allow the plea of a professional engagement to take precedence of all others, and to be an ample reason for the relinquishment of any present occupation. But as professional engagements may sometimes interfere, and delay one of the parties, the physician who first arrives should wait for his associate a reasonable period, after which the consultation should be considered as postponed to a new appointment. If it be the attending physician who is present, he will of course see the patient and prescribe; but if it be the consulting one, he should retire, except in case of emergency, or when he has been called from a considerable distance, in which latter case he may examine the patient, and give his opinion in *writing*, and *under seal*, to be delivered to his associate.

SEC. 6. In consultations, theoretical discussions should be avoided as occasioning perplexity and loss of time. For there may be much diversity of opinion concerning speculative points, with perfect agreement in those modes of practice which are founded, not on hypothesis, but on experience and observation.

SEC. 7. All discussions in consultation should be held as secret and confidential. Neither by words nor manner should any of the parties to a consultation assert or insinuate that any part of the treatment pursued did not receive his assent. The responsibility must be equally divided between the medical attendants; they must equally share the credit of success as well as the blame of failure.

SEC. 8. Should an irreconcilable diversity of opinion occur when several physicians are called upon to consult together,

the opinion of the majority should be considered as decisive; but if the numbers be equal on each side, then the decision should rest with the attending physician. It may, moreover, sometimes happen that two physicians cannot agree in their views of the nature of a case, and the treatment to be pursued. This is a circumstance much to be deplored, and should always be avoided, if possible, by mutual concessions, as far as they can be justified by a conscientious regard for the dictates of judgment. But in the event of its occurrence, a third physician should, if practicable, be called to act as umpire; and, if circumstances prevent the adoption of this course, it must be left to the patient to select the physician in whom he is most willing to confide. But, as every physician relies upon the rectitude of his judgment, he should, when left in the minority, politely and consistently retire from any further deliberation in the consultation, or participation in the management of the case.

SEC. 9. As circumstances sometimes occur to render a *special consultation* desirable, when the continued attendance of two physicians might be objectionable to the patient, the member of the faculty whose assistance is required in such cases should sedulously guard against all future unsolicited attendance. As such consultations require an extraordinary portion, both of time and attention, at least a double honorarium may be reasonably expected.

SEC. 10. A physician who is called upon to consult, should observe the most honorable and scrupulous regard for the character and standing of the practitioner in attendance; the practice of the latter, if necessary, should be justified as far as it can be, consistently with a conscientious regard for truth, and no hint or insinuation should be thrown out which could impair the confidence reposed in him, or affect his reputation. The consulting physician should also carefully refrain from any of those extraordinary attentions or assiduities which are too

often practiced by the dishonest, for the base purpose of gaining applause, or ingratiating themselves into the favor of families and individuals.

ART. V.—*Duties of Physicians in cases of Interference.*

SECTION 1. Medicine is a liberal profession, and those admitted into its ranks should found their expectations of practice upon the extent of their qualifications, not on intrigue or artifice.

SEC. 2. A physician, in his intercourse with a patient under the care of another practitioner, should observe the strictest caution and reserve. No meddling inquiries should be made—no disingenuous hints given relative to the nature and treatment of his disorder; nor any course of conduct pursued that may directly or indirectly tend to diminish the trust reposed in the physician employed.

SEC. 3. The same circumspection and reserve should be observed when, from motives of business or friendship a physician is prompted to visit an individual who is under the direction of another practitioner. Indeed, such visits should be avoided, except under peculiar circumstances; and when they are made, no particular inquiries should be instituted relative to the nature of the disease, or the remedies employed, but the topics of conversation should be as foreign to the case as circumstances will admit.

SEC. 4. A physician ought not to take charge of or prescribe for a patient who has recently been under the care of another member of the faculty in the same illness, except in cases of sudden emergency, or in consultation with the physician previously in attendance, or when the latter has relinquished the case, or been regularly notified that his services are no longer desired. Under such circumstances no unjust and illiberal insinuations should be thrown out in relation to the conduct or

practice previously pursued, which should be justified as far as candor and regard for truth and probity will permit; for it often happens that patients become dissatisfied when they do not experience immediate relief, and, as many diseases are naturally protracted, the want of success, in the first stage of treatment, affords no evidence of a lack of professional knowledge and skill.

SEC. 5. When a physician is called to an urgent case, because the family attendant is not at hand, he ought, unless his assistance in consultation is desired, to resign the care of the patient to the latter immediately on his arrival.

SEC. 6. It often happens, in cases of sudden illness, or of recent accidents and injuries, owing to the alarm and anxiety of friends, that a number of physicians are simultaneously sent for. Under these circumstances, courtesy should assign the patient to the first who arrives, who should select from those present any additional assistance that he may deem necessary. In all such cases, however, the practitioner who officiates should request the family physician, if there be one, to be called, and, unless his further attendance be requested, should resign the case to the latter on his arrival.

SEC. 7. When a physician is called to the patient of another practitioner, in consequence of the sickness or absence of the latter, he ought, on the return or recovery of the regular attendant, and with the consent of the patient, to surrender the case.

[The expression, "patient of another practitioner," is understood to mean a patient who may have been under the charge of another practitioner at the time of the attack of sickness, or departure from home of the latter, or who may have called for his attendance during his absence or sickness, or in any other manner given it to be understood that he regarded the said physician as his regular medical attendant.]

SEC. 8. A physician, when visiting a sick person in the country, may be desired to see a neighboring patient who is under the regular direction of another physician, in consequence of some sudden change or aggravation of symptoms. The conduct to be pursued on such an occasion is to give advice adapted to present circumstances; to interfere no further than is absolutely necessary with the general plan of treatment; to assume no future direction unless it be expressly desired; and in this last case, to request an immediate consultation with the practitioner previously employed.

SEC. 9. A wealthy physician should not give advice *gratis* to the affluent; because his doing so is an injury to his professional brethren. The office of a physician can never be supported as an exclusively beneficent one; and it is defrauding, in some degree, the common funds for its support, when fees are dispensed with which might justly be claimed.

SEC. 10. When a physician who has been engaged to attend a case of midwifery is absent, and another is sent for, if delivery is accomplished during the attendance of the latter, he is entitled to the fee, but should resign the patient to the practitioner first engaged.

ART. VI.—*Of Differences between Physicians.*

SECTION 1. Diversity of opinion and opposition of interest may, in the medical as in other professions, sometimes occasion controversy and even contention. Whenever such cases unfortunately occur, and cannot be immediately terminated, they should be referred to the arbitration of a sufficient number of physicians, or a *court-medical.*

SEC. 2. As peculiar reserve must be maintained by physicians towards the public, in regard to professional matters, and as there exist numerous points in medical ethics and etiquette

through which the feelings of medical men may be painfully assailed in their intercourse with each other, and which cannot be understood or appreciated by general society, neither the subject-matter of such differences, nor the adjudication of the arbitrators should be made public, as publicity, in a case of this nature, may be personally injurious to the individuals concerned, and can hardly fail to bring discredit on the faculty.

ART. VII.—*Of Pecuniary Acknowledgments.*

Some general rules should be adopted by the faculty, in every town or district, relative to *pecuniary acknowledgments* from their patients; and it should be deemed a point of honor to adhere to these rules with as much uniformity as varying circumstances will admit.

OF THE DUTIES OF THE PROFESSION TO THE PUBLIC, AND OF THE OBLIGATIONS OF THE PUBLIC TO THE PROFESSION.

ART. I.—*Duties of the Profession to the Public.*

SECTION 1. As good citizens, it is the duty of physicians to be ever vigilant for the welfare of the community, and to bear their part in sustaining its institutions and burdens; they should also be ever ready to give counsel to the public in relation to matters especially appertaining to their profession, as on subjects of medical police, public hygiene, and legal medicine. It is their province to enlighten the public in regard to quarantine regulations—the location, arrangement, and dietaries of hospitals, asylums, schools, prisons, and similar institutions—in relation to the medical police of towns, as drainage, ventilation, etc.—and in regard to measures for the prevention of epidemic and contagious diseases; and when pestilence prevails, it is their duty to face the danger, and to continue

their labors for the alleviation of the suffering, even at the jeopardy of their own lives.

SEC. 2. Medical men should also be always ready, when called on by the legally constituted authorities, to enlighten coroners' inquests and courts of justice, on subjects strictly medical — such as involve questions relating to sanity, legitimacy, murder by poisons or other violent means, and in regard to the various other subjects embraced in the science of Medical Jurisprudence. But in these cases, and especially where they are required to make a *post-mortem* examination, it is just, in consequence of the time, labor, and skill required, and the responsibility and risk they incur, that the public should award them a proper honorarium.

SEC. 3. There is no profession by the members of which eleemosynary services are more liberally dispensed than the medical, but justice requires that some limits should be placed to the performance of such good offices. Poverty, professional brotherhood, and certain of the public duties referred to in the first section of this article, should always be recognized as presenting valid claims for gratuitous services; but neither institutions endowed by the public or by rich individuals, societies for mutual benefit, for the insurance of lives or for analogous purposes, nor any profession or occupation, can be admitted to possess such privilege. Nor can it be justly expected of physicians to furnish certificates of inability to serve on juries, to perform militia duty, or to testify to the state of health of persons wishing to insure their lives, obtain pensions, or the like, without a pecuniary acknowledgment. But to individuals in indigent circumstances, such professional service should always be cheerfully and freely accorded.

SEC. 4. It is the duty of physicians, who are frequent witnesses of the enormities committed by quackery, and the injury to health and even destruction of life caused by the use of quack medicines, to enlighten the public on these subjects, to

expose the injury sustained by the unwary from the devices and pretensions of artful empirics and imposters. Physicians ought to use all the influence which they may possess, as professors in Colleges of Pharmacy, and by exercising their option in regard to the shops to which their prescriptions shall be sent, to discourage druggists and apothecaries from vending quack or secret medicines, or from being in any way engaged in their manufacture and sale.

ART. II.—*Obligations of the Public to Physicians.*

SECTION 1. The benefits accruing to the public, directly and indirectly, from the active and unwearied beneficence of the profession, are so numerous and important that physicians are justly entitled to the utmost consideration and respect from the community. The public ought likewise to entertain a just appreciation of medical qualifications; to make a proper discrimination between true science and the assumptions of ignorance and empiricism—to afford every encouragement and facility for the acquisition of medical education, and no longer to allow the statute-books to exhibit the anomaly of exacting knowledge from physicians, under a liability to heavy penalties, and of making them obnoxious to punishment for resorting to the only means of obtaining it.

Resolved, That this Association recognizes specialties as proper and legitimate fields of practice.

Resolved, That specialists shall be governed by the same rules of professional etiquette as have been laid down for general practitioners.

Resolved, That it shall not be proper for specialists publicly to advertise themselves such, or to assume any title not specially granted by a regularly-chartered college.

Resolved, That private handbills, addressed to members of the medical profession, or by cards in medical journals, calling the attention of professional brethren to themselves as specialists, be declared in violation of the Code of Ethics of the American Medical Association. (Vide Trans. A. M. A., vol. xx., p. 28.)

Whereas, The proper construction of Art. IV., Sec. 1, Code of Ethics, A. M. A., having been called for, relative to consultation with irregular practitioners who are graduates of schools,

Resolved, That said Art. IV., Sec. 1, Code of Ethics, excludes all such practitioners from recognition by the regular profes sion. (Vide Trans. A. M. A., vol. xx., p. 30.)

Whereas, The contract system is contrary to medical ethics,

Resolved, That all contract physicians, as well as those guilty of bidding for practice at less rates than those established by a majority of regular graduates of the same locality, be classed as irregular practitioners. (Vide Trans. A. M. A., vol. xx., p. 41.)

Resolved, That the members of the medical profession who in any way aid or abet the graduation of medical students in irregular or exclusive systems of medicine, are deemed thereby to violate the spirit of the ethics of the American Medical Association. (Vide Trans. A. M. A., vol. xxvii., p. 48.)

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CORLEY, W. F.....Waco
CHILDERS, J. V.....Dallas
CLOPTON, A. G.....Jefferson
CUTTER, GEO. A.....Dallas
CARRINGTON, J. S.....Dallas
CORNELIUS, M. A.....Dallas
CREATH, L. B.....Brenham
CUMMINGS, J..... .....Austin
CAROTHERS, A. E.....Austin
CHRISTIAN, GEO. W.....Weimer
COLLEY, THOS. M..... .....Palestine
COWLING, JAS.....Houston
CUPPLES, GEO.....San Antonio
CHEW, T. R.....San Antonio
DOWELL, GREENSVILLE, Galv'n
DEVEREUX, G. M.....Houston
DOWNMAN, H. P.....San Philippi
DENMAN, M. R.....Tyler
DAY, E. L.....
DYE, HENRY.....Plano
DOHME, W. A.....Austin
DALE, E. T.....Texarkana
DENTON, A. N.....San Marcos
DARR, H. H.....Hearne
DELOACH, A. B.....Longview
DAVIDSON, J. K.. .....Alleyton
DEJERNETT, R.....Jefferson
DUBOSE, J. G.....Florence
EWING, J. A.....Dallas
EAST, W. A.....Hallettsville
EADS, B. F.....Marshall
ELLETT, A. W.....Jonesville

EGON, S.....Sherman
FLEWELLEN, R. T.....Houston
FOSTER, G. W.....Wesley
FEARS, W. P., Wonders P. O., Nacogdoches County.
FIELD, J. T.....Fort Worth
FORT, J. M.....Paris
FENNELL, JAS. W.....Seguin
FORD, F. C.....Burkeville
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FLY, A. W.....Galveston
GOODMAN, W. J.....Tyler
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HERRMANN, THEO.....Bexar Co
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JAIGER, F. T.....Fort Bend Co
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JONES, E.....Tyler
JONES, JOHN C.....Gonzales
JAMESON, D. A.....Millicon
JOHNSON, FELIX H.....Marshall
JONES, W. D.....Waxahatchie
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KNOX, R. T.....Gonzales
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